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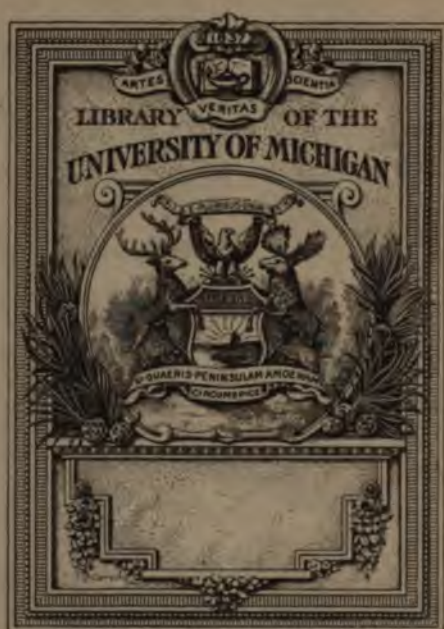
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1327, 39, 43, 44, 47 B. F. Johnson

THE
Medico-Chirurgical Review,
AND
JOURNAL
OF
MEDICAL SCIENCE.

EXHIBITING A COMPREHENSIVE ANALYTICAL RECORD OF
PROGRESSIVE MEDICINE AND SURGERY ;
EQUALLY ADAPTED TO ALL RANKS OF THE PROFESSION.

CONDUCTED BY
ASSOCIATED PHYSICIANS AND SURGEONS

AND SUPERINTENDED BY
JAMES JOHNSON, M. D.

AUTHOR OF A TREATISE ON TROPICAL CLIMATES, AND ON DISEASES
OF THE LIVER.

(Analytical Series.)

VOLUME I. for 1820.

Nec tibi quid liceat sed quid fecisse decebit
Occurrat mentemque domat respectus honesti. CLAUD.

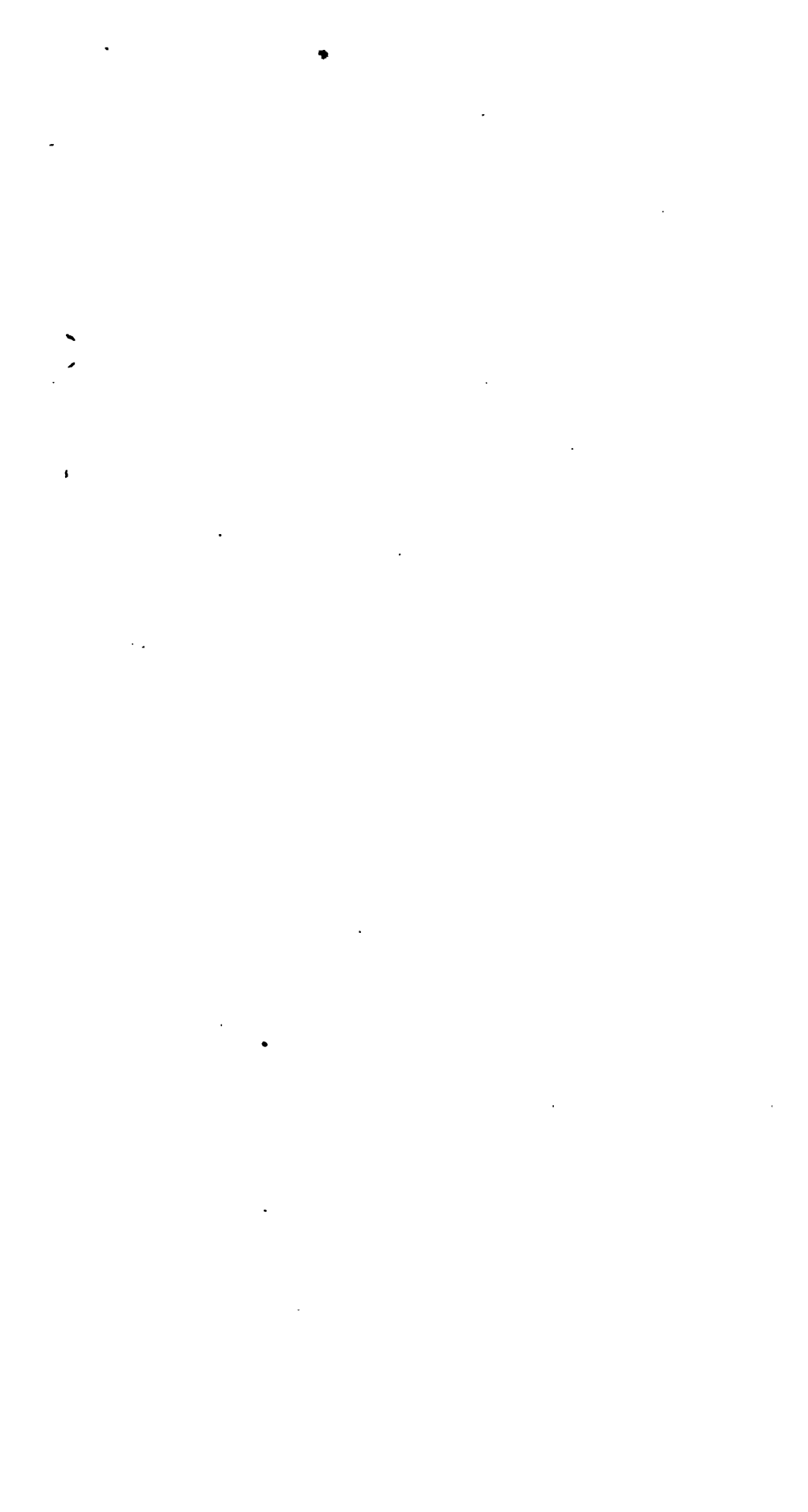
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PREFACE TO VOL. I.

ON closing the First Volume of our Analytical Series, it is a paramount duty to return unfeigned thanks to Subscribers and the Profession at large, for a degree of countenance and encouragement which we could not have expected, and probably did not deserve. We may safely affirm, however, that we have endeavoured to merit this patronage—and we hope it is evident that, with time and experience, the Journal has progressively improved. Often, indeed, when reflecting on the arduous nature of our undertaking, we have shuddered at the danger of the attempt. But the great difficulties are conquered—exuberance of assistance is perpetually at hand—and what was once an anxious task, is now a mental recreation.

The organization of the Journal has grown out of the intellectual stage of the age in which we live, and the swelling stream of general as well as professional literature. Every one, who is not interested in distorting truth, will now admit, that an ANALYTICAL REVIEW, on a large scale, is necessary, not only to reflect the great features of medical science diffusively through the profession, but to fix them in a form of record conservative of what is most valuable, and calculated alike for present *perusal* and subsequent *reference*. The latter object has been, and will ever be, kept steadily in view, from a thorough conviction that, by declining all temporary matter, and registering that only, which will be read with interest, and referred to with advantage, we are constructing a work, the volumes of which will become more valuable in proportion to their age. What an inestimable treasure would now be an Analytical Review of all that has been published during the last fifty years!—And with what interest will a future generation peruse these concentrated records of the medical science of the present era, distinguished as it is by intensity of thought, accuracy of observation, rigour of deduction, intrepidity of experiment, fertility of resource, and emancipation from prejudice!

In medical society there are necessarily gradations of rank and varieties of character. There are not a few, whose toilsome pro-

professional avocations leave no time for extensive reading—there are many whose “*res argusta domi*” confines the library within narrow limits—and there is a large portion scattered over the globe, *per mare ac terram*, who have no possible means of consulting the original works which daily issue from the press. Yet, in these different classes, no man can hope to retain his station in the estimation of his brethren, keep pace with the progress of science, or do justice to the art which he professes, without, at least, a periodical work to inform him what others are doing, and what others are thinking in the world around him.

As one of the now numerous candidates for performing this office, the Medico-Chirurgical Review has presented itself before the profession, in its present form, without any wish to depreciate its contemporaries, or to magnify the necessity that existed for new labourers in the vineyard of periodical literature. Such an attempt would be equally impolitic and illiberal. The PUBLIC is a stern, inflexible, and, finally, unerring tribunal, before which it is unnecessary to plead the cause of merit, and useless to varnish infirmity. Friends may flatter, and enemies may defame, but the Public at large do justice, because they are far removed from the sphere of personal feeling and influence. It is to this tribunal—and to this tribunal *alone*, that we shall ever appeal.

There is, however, a class of medical society, numerically not great, but potentially important, on which this journal may, probably, have some claims—it is the class of MEDICAL AUTHORS. To analytically portray their works before the whole professional circle, leaving the judgment in general to the Public itself, is no mean service to others—no common advantage to readers—no sine-cure office for reviewers—no inconsiderable check on hypercritics. Whether the MEDICO-CHIRURGICAL REVIEW executes this task, with any degree of credit to itself, or satisfaction to the public, it is for that Public to decide. If it does—their patronage will, in justice, be continued—if it does not, it will, with equal justice, be withdrawn. Literary competitions, in their effects, are directly the reverse of political struggles for ascendancy. Success may elevate, or failure depress individuals; but the contest is uniformly beneficial to the community at large. Whoever wears the laurel, the Public gains the prize.







PREFACE

To No. 2, for SEPTEMBER, 1820.

IN this Number of the Journal, the important subject of *Abdominal Inflammation*, particularly as it affects the serous tissues of that division of the body, forms the leading article, in continuation of the series of illustrations which it is designed to publish through this medium.

If, in this article, we have ventured to differ from our able countryman, Dr. Abercrombie, on some points of pathology and practice, it is with the profoundest respect for a gentleman whose talents do honour to the most intellectual city, and whose writings irradiate the most instructive Journal in Europe.

Insanity is copiously treated of in the Reviews of Drs. Esquirol, Haslam, and Burrows. Dr. Esquirol's Essay on this important disease is little known in this country, though it contains a great mass of valuable matter.

The attention of the faculty is here solicited to a dangerous *puerperal affection*, minutely delineated by that accurate observer, Dr. Marshall Hall, of Nottingham; while difficult parturition itself, a state often involving the safety both of mother and child, is ably treated of by Dr. Dewees, of America, whose work is, of course, but very little known to the British profession.

Two of the most important subjects which now agitate the medical and surgical world are varioloid diseases and syphilis. These topics are very fully treated of in the present Number of the Journal; and from the excellent works of Mr. Cross and Dr. Hennen, we have collected into a focus all the prominent features of the questions at issue, and all the practical deductions which can, as yet, be safely drawn from the facts hitherto ascertained.

From the writings of Messrs. Bell, White, Howship, and Shaw, we have selected a mass of the most important facts and highly interesting observations on diseases of the intestines, pelvic viscera, and their outlets, which cannot fail to prove a rich treat to our surgical readers, and a valuable reference in the hurry and anxiety of actual practice.

Such are the leading features of the present number, which we submit, with deference, to that profession whose approbation we are anxious to obtain, but whose indulgence we greatly require, in the execution of a task not unattended with difficulty, as well as labour. It would, at the same time, be doing an injustice to the public, and to our own feelings, did we not here express our grateful sense of the distinguished patronage with which this Journal has been honoured; and which we are conscious, has been far beyond the deserts of the work. We hope, however, to prove that, in this instance at least, success will have no influence in paralyzing those energies, or quenching that zeal which led to its attainment.

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VOL. I.] SEPTEMBER 1, 1820. [No. 2.

I.

PERITONEAL INFLAMMATION.

1. *Histoire des Phlegmasies, ou Inflammations Chroniques.*
Par F. J. V. BROUSSAIS, M. D. &c. Chapitre iv. De L'Inflammation du Péritoine. (Vol. II.)
2. *Peritonite :—Inflammation du Péritoine.* Par M. M. GASC.
[Dictionnaire des Sciences Medicales, Vol. XL.]
3. *Researches on the Pathology of the Intestinal Canal.* By
JOHN ABERCROMBIE, M. D. &c. &c.
[Edinburgh Medical and Surgical Journal, No. LXIII.]
4. *A Practical Treatise on various Diseases of the Abdominal Viscera.* By C. R. PEMBERTON, M. D. &c. &c. &c. 4th Edition, revised and corrected. London, 1820.
5. *Effets de l'Inflammation sur le Péritoine, reconnus par les Ouvertures de Cadavres.* Par M. M. MONTFALCON, M. D. &c. &c.

[Dict. des Sciences Med. tom. 40.]

IT is in vain to look for *minute* pathological anatomy beyond the circle of the last twenty years. Candour also obliges us to confess that (with a very few honourable exceptions)* it is not in this country we need look for it at all.

* Particularly Dr. Baillie's works.

This statement will highly offend the national pride and prejudice of those whose researches are limited to their own case-books, and who cannot conceive that medical superiority may exist beyond an arm of the sea, or a fresh-water stream. We believe we have already exhibited proofs that our continental brethren have outstripped us in pathology, and we shall steadily persevere in portraying the salutary examples of unwearied industry which they have set us, however bitter to swallow, or hard to digest, the potion may be.

No practitioner is unaware of the great importance and danger of abdominal inflammation; but even to this day, inflammations of the different tissues are too often confounded together, without due regard to their anatomical, physiological, and pathological peculiarities. How common is it to confound inflammation of the peritoneum with that of the organs which it covers, and to talk of isolated affections of the stomach, intestines, womb, &c. under the designations of gastritis, enteritis, hysteritis, as though the inflammation attacked, at one and the same time, the whole of the tissues composing those viscera! Yet nothing is more certain than that almost every acute inflammation of the organs above-mentioned, begins in a single tissue of their structure, with corresponding symptoms, and spreads thence to other tissues with more or less rapidity, according to the violence of the disease, and the mode of treatment, accompanied also by a train of phenomena indicative of the new structures successively invaded.

In by far the greater number of those cases termed gastritis and enteritis, the inflammation is pure peritonitis at the beginning, and the disease takes its name improperly from the organ over which the principal inflamed portion of peritoneum is spread;* though, in such instances, we rarely or never find the inflammation bounded by the limits of a single viscus, but wandering undefined over a greater or less extent of the peritoneal tunic. Every one now acknowledges that the pleura is frequently inflamed where the parenchymatous structure of the lungs escapes; and it is precisely so with the peritoneum, excepting that in the latter there is more danger than in the former. There is, indeed, a very close analogy between pleuritis and peritonitis. They begin, like all other

* This observation of Broussais seems confirmed by the later writings of Dr. Abercrombie. "Inflammation of the peritoneum, says Dr. A. may occur in a more limited form than in the disease which I have now described. and, according to the seat of it, may assume the appearance of disease of various organs. as the bladder, the kidney, the liver. &c." 167.

acute diseases, with chilliness, succeeded by heat, fever, &c. They show the peculiar character of *serous inflammations*—extremely acute pain, wandering or fixed, accompanied by a distressing sense of internal heat. As in pleurisy the pain is complained of in a single point, although the whole sheet of pleura be inflamed; so, in peritonitis, the pain or tenderness is generally referred to a particular part, even when the phlogosis is very extensive.

“As cough and expectoration (says M. Gasc) take place in pleurisy, so nausea and vomiting are common attendants on peritonitis. As pleurisy is under atmospheric influence, and sometimes appears to spread epidemically, so does peritoneal inflammation. As hydrothorax frequently results from pleuritis, so does ascites from peritoneal inflammation. Pleurisy sometimes terminates in suppuration, and produces empyema; peritonitis occasionally gives rise to a puriform effusion that almost invariably proves mortal. In pleuritic inflammation, coagulable lymph is thrown out, and adhesions are formed; in peritoneal inflammation, the intestines are often glued together by the same substance.” *Dict. des Sciences Med. tom. 40, p. 497.*

After these preliminary observations, we shall proceed systematically in drawing up a synthetical article on the important disease now under review.

I. ETIOLOGY.

The *predisposing* causes of peritoneal inflammation are involved in obscurity, and may depend much on idiosyncrasy. Among these, however, have been ranged, plethora, irritable habit, abuse of inebriating liquors, ultra-excitement of the passions, cold seasons of the year, damp habitations.

The *exciting* causes are various; some are mechanical, some chymical. Thus, compression of the abdominal viscera, blows or falls on that region; in short, every contusion or general commotion of the abdomen may determine a focus of irritation, and ultimately inflammation on its peritoneal lining. Mechanical irritation also results frequently from internal friction or pressure, as of the gravid uterus, extra-uterine conceptions, enlarged ovaries, or other morbid growths within the abdomen. M. Broussais considers violent and long-continued corporeal exertions, violent and repeated contractions of the abdominal muscles in vomiting, the centripetal oscillations of the blood in the cold stages of intermittents, and strictures of the colon or rectum producing unnatural contortions and friction of the intestines on one another, as causes of peritoneal inflammation.

Among the chymical internal irritations may be placed all

extravasations not quickly absorbed, as blood, bile, chyle, urine, fæces, and perhaps the morbid serous secretions of the tissue itself. But the grand causes are to be sought in the action of a cold atmosphere on the surface of the body, the application of wet or cold, especially to the feet, when the person is in a state of corporeal inaction, the neglect of changing wet clothes, the drinking of cold liquids when the body is heated, and whatever suddenly interrupts certain functions of the system, as the suppression of perspiration, the lochia, and the menstrual discharge.

Over the causes which produce epidemic dispensations of this disease, the same veil of mystery hangs, that conceals from our view the Etiology of other Epidemics. M. Broussais saw the disease epidemic, and apparently contagious among the French armies, in various parts of the continent—in Germany, Holland, and Italy. We have all seen puerperal peritonitis epidemic in our own country. The translation of rheumatic, arthritic, or erysipelatous inflammations from the joints or surface of the body to the interior tissues, is not to be overlooked by the observant practitioner, or ridiculed by the sceptical sciologist.

According to the force of the cause and the constitution of the subject, we have peritoneal inflammation of the acute or chronic form. These forms may not be very distinct, when they are passing to or from one another; but, at all other times, they are sufficiently distinguishable, and accompanied by marked peculiarities and features.

II. SYMPTOMATOLOGY.

Acute Peritonitis is generally ushered in with horripilation or cold chills, sometimes amounting to rigours, accompanied by malaise and weariness of the limbs. It not unfrequently happens, that this chilly stage continues for even one, two, or three days, before re-action takes place; at other times, however, this cold stage is of short duration; and heat succeeds, more or less pungent, with headach, constriction of the epigastric region, and frequent, hard, concentrated pulse. The face is usually pale, and often covered with cold clammy sweat; but the abdominal pains produce certain muscular contractions of the face, which give the countenance a peculiar sharpness of feature, characteristic of this disease. Sometimes there is a degree of livor of countenance; at others, it is animated with an air of agitation; or fixed, and determined. The intellectual faculties are generally performed soundly till the last, with occasional delirious wanderings, and convulsive movements of the head and limbs. To the

foregoing symptoms we may add sleeplessness, thirst, a sense of stupor, with coldness of the extremities. Little can be drawn from the state of the secretory and excretory functions, which vary much, according to the intensity of the disease, and other circumstances of the patient. Such are the *general* phenomena; the *local*, or characteristic symptoms, deserve a separate consideration.

Peritonitis being declared, the abdomen becomes painful, sometimes to such a degree, that the least pressure is insupportable, and even the weight of the bedclothes is distressing. This pain is very different from that attending dysentery, being infinitely more acute, and constant. It also differs from that attending phlogosis of any particular abdominal organ. In peritonitis the pain is sometimes fixed, and then it appears confined to a single point; at other times, it is general or wandering, according to the extent of the inflammation. The patient dare not lie in any other position than on the back, and is afraid of moving, on account of the exasperation of pain attending every motion. Both tension and swelling may now be detected in the abdomen, partly from flatulence in the bowels, partly from emphysema of the subjacent cellular substance. Hiccup, nausea, and vomiting supervene, with anxiety, frequent and laborious respiration, especially inspiration, from the descent of the diaphragm on the abdominal viscera. There is sometimes diarrhœa, but generally constipation of the bowels.*

Such are the open forms of the disease. But the symptoms above enumerated are often modified by age, constitution, season, and other circumstances. Thus, in some subjects, of feeble powers and advanced in age, peritonitis will creep on without fever; nay, without local pain—and yet the disorder will go on to complete disorganization of the peritoneum, or such an effusion of serous fluid as gives the complaint the character of ascites. In some subjects, the thickness of the muscles and parietes of the abdomen renders the pain of pressure scarce perceptible. In such case, M. Broussais directs us to make *lateral* pressure towards the centre of the abdomen.

“Elle (douleur) était plus difficile à supporter quand on la faisait (pression) latéralement, en la dirigeant vers le centre. Ce signe est un des meilleurs pour faire découvrir les péritonites obscures.” *Vol. II. p. 413.*

* “Elle arrête (says Broussais) les excretions alvines. On conçoit qu’elles sont impossibles, lorsqu’on remarque que tous efforts pour aller à la selle ont pour uriner, ainsi que les secousses de la touse, et de l’éternument, sont insupportable.” *Vol. II. p. 492.*

To this symptomatology of the French authors we can add little from our countryman, Dr. Abercrombie. Indeed, if the reader will compare Dr. A's description of inflammation of the peritoneal coat of the intestines, in pages 666 and 667 of the *Edinburgh Journal*, he will find it, in many places, almost a literal transcript from Broussais, published twelve years ago. By this we do not mean to say that Dr. A. copied from Broussais; but we think that he ought to have extended his *researches* a little farther, and noticed the investigations of so distinguished a pathologist as M. Broussais. These remarks will apply still more forcibly to the pathology than to the symptomatology of the disease under consideration.

In some epistolary communications, which the writer of this article lately had with an esteemed friend and able physician,* there are some passages which are highly worthy of notice.

"Though we chiefly judge (says Dr. D.) of the degree of abdominal inflammation by the severity and constancy of the *pain*; yet a fatal disease may be going on, though the pain be far from acute, or only recurring at intervals. The grand criterion is the ability of bearing manual pressure; and *this* we are not to estimate solely by the complaint, but by the countenance also of the patient. Even gentle pressure causes a sudden retraction of the lips, and expression of pain, as if he were pierced by a sharp instrument. On the other hand, we are not to overrate the tenderness, (though it is the surest diagnostic) by the wincing of the patient, especially if very irritable, or young, and afraid of being hurt—or if the bowels happen to be uneasy and distended with flatus at the time. The pulse is deceitful, and only to be regarded in conjunction with the other phenomena. Though the pain, tenderness, and other symptoms have subsided, yet this abatement is not to be relied on, so long as the pulse keeps up, particularly if the tongue does not clean, or after being so, is disposed to resume its coat; in such circumstances, there is great danger of relapse, from any dietetic indulgence, exposure to cold, or getting up too soon. Bearing the erect posture well, is certainly a proof of diminished tenderness; but the attempt should not be hazarded too early. When the pain returns at intervals, but is not of long duration, it is often difficult, particularly in young subjects, to know whether it is from unsubdued inflammatory action, or to be referred to griping colicky pains from the operation of medicine. Where we are in doubt whether pain be inflammatory or spasmodic, the safe plan is to treat it as the former. The bowels are generally obstinately closed during the first days of enteritis, with vomiting in proportion to the degree of anti-peristal-

* Dr. Dickson of Clifton.

tic motion, sympathy, or the extent and spreading upwards of the inflammation. Even after free motions have been procured, constipation is very apt to recur, and the bowels are tardy and difficult to manage throughout the whole course of the disease."

This observation of Dr. Dickson accords with our own experience, and with that of all the best authors and practitioners. We cannot but regard the following sentence of Dr. Abercrombie, therefore, as tending to impress the inexperienced mind with a description which is, generally speaking, erroneous, and a principle which is exceedingly dangerous.

"We have seen (says Dr. A.) the bowels obstructed; we have seen them natural; and we have seen them spontaneously loose: and under these varying circumstances, we have found the disease going on with equal certainty, and equal rapidity, to a fatal termination." *Ed. Journ.*

Those who have not seen much of peritoneal or abdominal inflammation, would naturally conclude that the above states were so nearly equal in point of occurrence, that nothing was to be thence inferred; whereas we appeal to the observation of practitioners, whether constipation is not as general a concomitant of *peritoneal* inflammation, as dysenteric purging is of inflammation of the mucous membrane of the intestines. Exceptions will occur to all general rules, of course; but really Dr. Abercrombie appears to us to have confounded in the above sentence, two very different inflammations—that of the internal and that of the external coats of the intestinal canal—requiring a very considerable modification of treatment. This error would be of less consequence, did it emanate from a weaker authority. As it stands, it is calculated to do harm; and hence our anxiety to combat it.

We may here cite the authority (no mean one by the by) of Dr. Gregory, the present professor in Edinburgh.

"Enteritis (says he) is generally attended with costiveness; when the belly is open, it is a good sign." *M.S. Lectures.*

"Bleeding (says the same Professor) is particularly necessary; but the great view is to keep the belly open. Whenever it is in a natural state, the danger is over."

Dr. Gregory warmly recommends laxative glysters, as superior to purgatives, by the mouth.

Dr. Pemberton's authority may be also quoted for constipation being a general attendant on enteritis.

"The bowels (says this distinguished Physician) are obstinately costive; what is injected is returned unaltered; and what passes from the rectum unsolicited, is devoid of the ordinary smell and colour of *feces*." *4th Edit. p. 177.*

The march of acute peritonitis is generally short.

"I have never (says Broussais) seen peritoneal inflammation, accompanied by much pain and fever, prolonged beyond the medium duration of inflammations of other serous structures—from ten to twenty days. I have remarked, that when the disease did not give way in that space of time to proper treatment, it proved fatal suddenly. I have never seen this inflammation pass from a state of violence to that of tranquillity, after going through the acute stadia, as we sometimes observe in inflammations of the chest, and of the mucous membrane of the bowels. Of the chronic cases of peritonitis which I have met, a few had pain and fever for about three or four days, at the utmost; but the majority of cases had crept on so insensibly, that no account could be obtained of the commencement of the inflammation." *Vol. ii.*

This inflammation may terminate by resolution, suppuration or effusion, gangrene, and chronic peritonitis.

Resolution. The termination by resolution generally takes place between the fifth and tenth day; sometimes the fifteenth or twentieth. It is announced by cessation of pain, fever, and other inflammatory symptoms; a re-establishment of function in the contiguous organs; a power of turning to one or both sides in bed; a disappearance of the nausea and vomiting; free evacuations from the bowels, kidneys, and skin; refreshing sleep.

Suppuration and Effusion. This is a frequent termination in fatal cases; and it is difficult to ascertain the precise period when pus or effusion is produced. There is generally a diminution of the abdominal pain, with a sense of weight and oppression; irregular chills; a softness in the pulse; paleness of the countenance; coldness of the extremities—death.

In peritoneal suppuration we have no ulceration or other breach of continuity in the membrane. The purulent matter appears to be thrown out by a kind of exhalation or secretion, as the ordinary serous fluids. The colour and consistence of the purulent matter are very various; being reddish, greenish, or white, like milk, with shreds of membrane, and albuminous flocculi floating in it.

The internal surface of the peritoneum in health, is always secreting a serous halitus. When inflamed, the gorged state of its vessels will sometimes cause a sanguineous effusion, instances of which are related by Broussais. But more commonly in peritoneal inflammation, there is a preternatural serous secretion, of various colours and consistencies, which accumulating in the abdomen, increases the irritation and aggravates the inflammation.

The absence of redness in the peritoneum, on dissection.

is no proof that phlogosis did not exist previously ; for Bichât has well observed, that death having removed all irritation from this membrane, its capillary vessels may so far shrink, in some cases, that no turgescence or redness is visible, in the same manner as erysipelas, morbilli, scarlatina, &c. disappear from the surface of the body after death.

Gangrene. Of all inflammations of *serous* membranes, peritonitis, when violent, is most disposed to run into gangrene. The phenomena indicative of this termination are sufficiently obvious. A sudden cessation of the abdominal pain ; smallness of the pulse, which becomes concentrated and intermitting ; prostration of strength ; and facies hippocratica, announce the approach of death.

Another termination of acute peritonitis, is so important that it must occupy a considerable share of our attention.

CHRONIC PERITONITIS. When acute inflammation of the peritoneum continues beyond the fifteenth or twentieth day, it becomes chronic ; but this last form of the disease is by no means always preceded by acute peritonitis. It often steals on, from the same causes as were before enumerated, in a slow and insensible manner ; especially when the patient is advanced in age, or debilitated in constitution. Particular occupations, which cause pressure on the abdomen, predispose to, if they do not excite this disease ; and, in its etiology, may be ranked unhealthy localities ; cold and moisture ; poverty ; prolonged residence in hospitals ; fatigue ; forced marches among the soldiery ; unwholesome food acting as an irritation on the abdominal viscera ; protracted intermittents ; every kind of slow effusion into the cavity of the peritoneum.

Its approach is so insidious, (when it does not succeed the acute form) that we never see it at its commencement ; consequently, we can only describe its early symptoms by watching the transition from the acute to the chronic forms of the disease. The patient experiences a kind of constant, morbid feeling in the abdomen, rendered more obvious by pressure. It is the property, however, of *chronic* inflammations of the serous membranes to excite very little acute pain, "being rather acute tenderness than actual pain."—*Abercrombie*.

Baglivi, Morgagni, and others have seen the pleura, a membrane so sensible in acute pleuritis, completely disorganized, and even profoundly suppurated, in chronic inflammation, without the patient having ever complained of the least pain. It is, therefore, highly imperative on us to watch

the patient after an attack of acute peritoneal inflammation, and not be thrown off our guard by the cessation of suffering. Sometimes, however, when chronic succeeds acute peritonitis, the patient complains of a fixed pain, like a stitch, at the epigastrium, which is aggravated by any sudden movements, unusual exercise, sneezing, &c.

If we examine the abdomen, a slight tumefaction, and glossiness of the surface will be perceived, especially towards evening. Dr. Pemberton observes, that the patient—

“Only complains, after fatigue, of a certain degree of tightness, and pricking soreness across the abdomen, from one os ilium to the other. This state will continue, with little variation, for many months; during which time the operations of the bowels will sometimes proceed naturally, though more commonly the patient is costive. There is no tension of the skin of the abdomen, as in the acute species: on the contrary, I have more than once observed the skin and abdominal muscles to sit loosely upon the peritoneum, which has given a sensation to the touch, as of a tight bandage underneath, over which the skin and muscles may be said (as it were) to slide. The patient always complains more of tightness than of pain; and as this tightness is much increased by any congestion in the bowels, the relief which he experiences from evacuating their contents, leads him to attribute his sensations to an habitual costiveness.” *Fourth Edition, p. 11.*

The appetite is often preserved, and the digestion but little deranged; in which cases, we may conclude, that the peritoneum reflected over the stomach, is not very deeply involved in the disease. At other times, however, there is vomiting, but this is not to be considered a pathognomonic symptom of chronic peritonitis. Broussais mentions a sensation, as though a ball were rolling about in the abdomen, and sometimes approaching the throat; this he attributes to the agglutination of the intestines, which form, with the gorged mesenteric glands, a round and mobile mass in the belly, often without any effused fluid.

The general, or symptomatic phenomena of chronic peritonitis are very obscure. The pulse is natural, except towards evening, when it becomes quickened, with some augmentation of heat, a little colour on the cheeks; and some dyspnoea and cough, when the patient lies horizontally.* These symptoms give cause to apprehend, that some effusion is going on in the abdomen, and the suspicion is strength-

* Dr. Pemberton says, he has not observed these evening accessions of febrile symptoms; but rather a languor, with a pallid, and doughy appearance of the face.

ened by the appearance of any œdema of the ancles, and paucity of urine. Constipation of the bowels is not so common in the chronic, as in the acute peritonitis. Diarrhœa occasionally takes place towards the close of the patient's life.

The *Diagnosis* is sometimes extremely obscure in this disease. When the case is unequivocal, the prognosis is almost invariably unfavourable. In short, "when the disease has made any progress, says M. Gasc, it is rare that we have not *tubercular depositions*, more or less abundant, in the peritoneum, and the matter of which they are formed, being little susceptible of absorption, is, in itself, ultimately, the cause of death."

"En effet, dans la maladie parvenue à ce degré, il est rare qu'il n'yait pas, dans le tissu du peritoine, des *depôts tuberculeux* plus ou moins abondans, et la matiere qui la forme, étant peu susceptible d'être absorbée, serait, à elle seule, à la longue, une cause de mort."

Our readers will easily see, that the French authors, under Review, are describing evidently Dr. Baron's "tuberculated accretions of the serous membranes;" with this difference, that they place the disease to the account of chronic inflammation of the peritoneum—he to an hydatid origin, independent of inflammation. Time must ultimately decide between them. In the mean while it is necessary, in obedience to the good old maxim, "*suum cuique*," to state, that neither the French nor the English authors have the merit of originality in ascribing the origin of tubercles to hydatids. That sagacious pathologist, MORGAGNI, has distinctly insisted on this identity, in several places; but the following instances are sufficient for our purpose.

"The observations which I have very frequently made upon the tunica albuginea and vaginalis of the testis, induce me to believe, that the membranous laminæ of the hydatids, or of the coats in which they are formed, after they have, by rupture, poured out their fluid contents, first contract themselves and their vessels into the form of a caruncle; and, unless a fresh fluid continue to flow thither, are finally so indurated, and dried up, as to represent those *white and hard tubercles of a roundish figure, some larger in their size, and some less, as the hydatids had been, with which the internal surface of the peritoneum, and the production of it over the external surface of the spleen and intestines were beset.* Postquam disruptæ hunc effuderunt, se suaque vascula in carunculæ formam primum contrahere, et nisi novus illac humor effluere pergat, indurari, et exsiccari denique sic, ut alba illa, et dura subrotunda tubercula representent alia aliis, ut hydatides fuerant, majora aut minora,

qualibus in descripta virgine intima peritonei facies, ejusque productio, &c." *Epistle 38, Article 35.*

Again, in the same Epistle, Morgagni observes—

"Finally, read over again what I have formerly written to you,* of hard granules, or tubercles being prominent on the internal surface of the peritoneum and pleura, and you will certainly find *the series of changes that I have described.* It happened some years ago, that, in a woman who had been taken off by an ascites, the external coat of the intestine was found to be distinguished with very frequent tubercles. When I first examined them, they resembled small turgid lenticular glands; but they were without an orifice, and solid, and seemed to be made up neither of glandular, nor of a fleshy substance; but to be of a middle nature, as it were, betwixt both. I judged that I could determine on nothing more probable, in regard to them, than to suppose, that they were the *remains of ruptured hydatids contracted into themselves.* Censui nihil veri similius a me posse statui, quam si disruptarum hydatidum reliquias esse conjicerem, in se contractas, ut siccæ esse possent, et duræ."

The above, and many other passages prove, that Morgagni maintained the hydatid origin of tubercles; but this author does not assent to the doctrine of Wharton and others, that these hydatids were formed by certain "insterstices of the lymphæ-ducts, for (says he) it is long ago that Ruysch admonished us of a great number of hydatids being found in the placenta uteri; sometimes, as I have also seen, and in other parts, in like manner, wherein no lymphatics are found." *Epistle 38, Article 38.*

If Morgagni then has anticipated our countryman, he is, at the same time, a strong authority in favour of Dr. Baron's theory.

The duration of chronic peritonitis is extremely variable—it may destroy the patient in a few months; and he may linger for years under it. Twelve years ago, M. Broussais pronounced it incurable. Since that time, however, more extensive experience has presented to this able physician many instances of recovery.

III. MORBID APPEARANCES IN ACUTE PERITONITIS.

The results of numerous dissections have long proved, that the peritoneum may be partially or totally inflamed, without any similar affection of the subjacent organs. In numerous instances the muscular and mucous tissues of the

* Epistle 16, No. 30; and Epistle 22, No. 186.

stomach, intestines, and other hollow viscera, were found perfectly sound, even when the peritoneal coat was gangrened. In general, the traces of inflammation are more and more strongly marked, according to the duration of the disease, and its degree of violence. Sometimes the vessels of the peritoneum are seen finely injected ; at others, the redness is scarcely perceptible, owing to the reflux of blood from the capillaries, in articulo mortis.

Bayle, Broussais, and others have noted the following morbid appearances after *acute* peritonitis. 1mo. Redness, thickenings, and even eschars, which penetrated to the mucous membrane of the peritoneum. 2do. Solid exudations, in form of false membranes, lining the serous surface of the peritoneum, but without organization. 3tio. A liquid exudation, sometimes turbid, sometimes limpid or reddish. More or less of serous and purulent fluid was always found in the abdominal cavity, bathing the surface of the intestines. 4to. M. Broussais also found red clots, sometimes thin, sometimes thick, spread over, in form of membrane, the peritoneum, which was reddened and thickened underneath. Blood itself has been found effused from the peritoneal lining of the abdomen, without any apparent breach of vessel or substance.

In most cases, where acute peritonitis has been cured, and the patient soon afterwards died of other diseases, adhesions were found, similar to those occasioned by pleurisy.

The appearances on dissection, after *chronic* peritonitis, are very different from those above enumerated, as resulting from the acute form of the disease.

In chronic peritonitis the peritoneum acquires a greater degree of morbid thickening, and the inflammation appears to have penetrated to the different structures of the subjacent organs. The effusion is serous, limpid, or greenish, or reddish, with white, purulent-looking filaments floating about. Occasionally we find spread over the whole extent of the peritoneum, or over some of the envelopes which it lends to various organs, a crop of granulations, pisiform, white, and not unlike certain miliary eruptions of the skin. Bayle, who has examined these granulations very minutely, observes that, in a subject who presented them to a great extent, he could scrape them off very easily with the scalpel, in many places, and *there* the peritoneum underneath appeared perfectly sound. In other parts, however, they could not be raised from the membrane without tearing the latter. Broussais has also related numerous cases where the peritoneum was larded, and immensely thickened with crops of tubercles.

"I have also (says the same author) seen a species of vesicles, similar to hydatids, formed of the most limpid serum, under a transparent sheet of membrane which had been elevated thereby."

"J'ai vu des especes de vésicules, semblables a des hydatides formées par un amas de la sérosité la plus limpide, sous un feuillet transparent qu'elle avait soulevé."

Broussais observed that thin men, of a lymphatic temperament, and who had been weakened by any disease, particularly by protracted intermittents, were the most subject to these tuberculated disorganizations of the peritoneum.

The subjects opened by M. Laennec presented the following morbid appearances in the abdomen. On perforating the peritoneum a quantity of gas rushed out, which had the odour of sulphurated hydrogen.* The intestinal canal was found singularly conglomerated, and agglutinated into one mass, and partly covered by thickened and adherent epiploon. In some cases the intestines were entangled and twisted upon each other, and glued together by false membranes. The peritoneum itself was thickened, disorganized, and tuberculated, in the manner already described, with effusions of various kinds in the cavity of the abdomen.†

It is evident that these chronic disorganizations of the peritoneum, cannot long exist without affecting the structure, and consequently the functions of the various abdominal viscera. Hence the digestion, chylification, biliary secretion, &c. all become deranged, and present a complication of distressing phenomena. But not only is the disease propagated to the organs over which the peritoneum is spread—it is not seldom extended to the serous tissues of other cavities than that of the abdomen. And here we shall detail a case which will set in a very clear point of view the superiority of English *practice* in inflammatory diseases, over that of our continental brethren, notwithstanding the light which pathologi-

* See the ingenious observations of Dr. A. B. Granville on this subject, in a paper read before the Royal Society, and partly published in Professor Brande's Journal.

† We cannot help lamenting here the exceeding barrenness of Dr. Abercrombie's *pathology* in the disease under consideration. It is given in two or three lines. "On dissection we find uniformly effusion of coagulable lymph; in some cases very extensive, and frequently effusion of a turbid or puriform fluid, sometimes in considerable quantity. Gangrene is rare." 167. The case-book of no *private* practitioner (however ample his range of practice) can furnish sufficient *pathological* details. It is in great civil or military establishments, where dissection is universal and unobstructed, that we are to find minute and comprehensive pathology. This article will exhibit so forcible an illustration of the truth of the above assertion, that we shall say no more on the subject here.

cal anatomy has diffused over the subject in France particularly.

"*Case.* Gothard Lich, aged 25 years, a fusileer in the 2d regt. of Hessian Infantry, was received into the hospital, at Dantzic, on the 3d of April, 1812. On the 4th he was seen by M. Gasc; his skin was very hot, with intense pain of forehead and occiput; face and eyes red; tongue white; respiration laborious; acute pain in the left side of the thorax; constipation of bowels; urine scanty and high coloured; burning heat in the soles of the feet; pulse strong, frequent, and full. The patient was robust, and had experienced a well-marked shiver the evening before, when mounting guard. M. Gasc prescribed a bleeding from the arm, with a *nitrated decoction of marsh mallows, and emulsions with some cooling powders!* (no purgative was ordered.) Besides the above means, fomentations were applied to the abdomen and chest. The patient experienced a temporary relief; but in the evening an exacerbation came on, and the night was spent in great agitation. (No repetition of bleeding was ordered to meet the rising storm of inflammation! No! one bleeding in one day was thought quite enough!)

"April 5th. Venesection was repeated, and the other medicines continued. The day and succeeding night more calm.

"6th. The fever appearing mitigated, and there being some gastric symptoms present, M. Gasc ventured on the exhibition of a little cream of tartar, which procured two or three motions.

"7th. The patient has had a bad night, with great heat and restlessness; the head painful and heavy; the eyes red and inflamed; the countenance animated; temporal arteries throbbing; tongue dry; skin arid; pulse quick and full. (Who, on this side of the Channel, would not have bled profusely from the arm or temporal artery in this state of things?) Leeches were applied to the temples, with some relief; barley ptisan, with nitre, and oily emulsions, alternating.

"8th. Restless nights; symptoms as high as ever; heat insupportable; mouth dry; stupor; alteration of the features; oppression of the chest; delirium; tension and swelling of the abdomen, *Ptisans and emulsions continued. Cold applications to the head; emollient clysters.*

"9th. Delirious all last night—some remission this morning; yet the pulse is strong, frequent, and irregular, with stupor, dry tongue, and intense thirst; abdomen distended and tympanitic, with tenderness on pressure. Fomentations, nitrated decoctions; and, to please a Brunonian brother officer who was present, *camphor, æther, valerian, &c.!* Towards evening (as might easily be anticipated) an exacerbation, ushered in by a slight rigour.

"10th. Delirium still higher last night than during the preceding, and the patient was constantly putting his hands up to his head, as though that were the chief seat of the complaint; difficulty of breathing; *pulse frequent and strong.* Desisted from the Brunonian stimuli, and applied leeches to the head. The symptoms were alleviated, and the patient passed an easy day and night.

"11th. *Spontaneous* evacuations from the bowels, with relief; but towards evening all the violent symptoms returned."

We have not patience to relate the daily mismanagement of this case. Some calomel and digitalis were given, with temporary relief; but no bleeding, blistering, or purging were ever dreamt of, and this fine young man expired on the 19th, after unheard-of sufferings!

"*Dissection.* Much blood in the skull; sinuses gorged; vessels of the pia mater injected; pia mater in some places inflamed, in others, exhibiting traces of real suppuration; not much water in the lateral ventricles, but the fourth ventricle full of serous effusion.

"When the thorax was opened, much bloody serum rushed out; the pleura costalis and pulmonalis of the right side glued together, with portions inflamed and suppurated. Substance of the lungs sound; but the cavity of the pericardium filled with purulent serum. The heart every where covered with a yellow membraniform exudation, two lines in thickness. The internal surface of the pericardium covered with a similar coat. The peritoneum throughout its whole extent, both where it lines the parietes of the abdomen, and is reflected over the various organs, was red, and injected with blood. The cavity of the abdomen itself contained a quantity of whitish purulent serosity, bathing the viscera and peritoneum. Liver enlarged and gorged with blood. The mucous surface of the stomach and bowels perfectly healthy."

The above case should be written in letters of gold, and hung up in every ward for acute diseases, in hospitals and infirmaries; nay, if it were placed in every medical man's study, and glanced over before he went out on his rounds, it would prove an invaluable beacon to guide him clear of Brunonian rocks and quicksands. Such effects of disease, fortunately, could not be seen in this country, where we are not such disciples of Hippocrates, and the "medicine expectante," as to hope for Jupiter to come down and drag our wagon out of the mire, while we ourselves stand by with our arms folded. An English patient told a French physician, that "in his [the Englishman's] country they treated the patients as though they were horses."* The able physician to whom this was said (our esteemed friend Dr. Ducamp) will peruse the above case, and these reflections on it: and we appeal to his judgment and candour, whether his countryman would not have acted more wisely in putting this *equestrian* discipline in force with his patient, rather than treat him as though he were composed of such machinery as would not bear the least interference of art.

* Dans mon pays, on traite nos malades come des chevaux."

Journ. Gen. de Med. February, 1826

We confidently hope that the free intercourse which now subsists between these islands and the continent, will mutually enrich the profession on both sides of the channel. We candidly acknowledge our inferiority in *pathology*, and shall not be ashamed to profit by the researches of our neighbours. Let them evince similar wisdom, by giving the energetic *practice* of British physicians a fair trial; and we prognosticate that their ultra-adoration of Hippocrates will diminish.

IV. TREATMENT OF ACUTE PERITONITIS.

Here we shall, in a great measure, abandon the writings of our foreign brethren, for very obvious reasons, and confine ourselves to our own country; nay, we shall draw the materials of this section of the article principally from our own observations and experience, which are often serviceable in enabling us to judge between cabinet speculations and clinical deductions—no unimportant function of a reviewer, and in which, some medical critics of the present day evince a plentiful lack of discrimination.

We have taken various opportunities, in this Journal, of drawing the attention of our brethren to the intimate connexion between the nervous and vascular systems; or, in other words, between irritation and inflammation. In peritonitis, it is particularly desirable to remove, as much as possible, every source of pain and irritation, by derobing the patient of all articles of clothing which might compress the abdomen, by enjoining quietude, by an easy position in bed, by pure and mild air of the apartment, and by the prohibition of all intrusive and useless visitations. These are necessary precautions, which are too often overlooked by the inexperienced; but which mark the practitioner of science and observation.

If, on examining the abdomen, we find local *pain on pressure*, whether general fever has been lighted up or not, we shall seldom act wrongly, by attributing that pain to inflammation, and by treating it as such. The measures pursued in the phlegmasiæ of this country are few in number, but decisive in effect. Although the efficacy of blood-letting, especially in peritonitis, is proportionate to the earliness of its employment; yet we do not see any good reason why it should not be put in force at any period or stage of the disease, *while inflammation exists*. If inflammation be on the point of terminating in gangrene or effusion, what will prevent these, if blood-letting do not? The patient may not bear the same measure of evacuation at a late as at an early stadium of the

complaint, but the indications are precisely the same at both periods; viz. 1mo. To lessen the force of the heart, and the fulness of the general vascular system. 2do. To relieve the vessels of the particular part inflamed, of their overplus of blood and irritation. General and local bleedings are the grand means of effecting these objects; but they are not the sole means.

As we know that peritoneal inflammation may be going on insidiously, without much affection of the general system, we ought rarely to commence in any other way than by venesection; and that carried to the extent of relieving local pain, or inducing syncope, or a strong tendency to it. Where the symptoms are previously equivocal, this measure very often gives a fuller development to the nature of the disease, and seldom, indeed, can any danger be apprehended from it, even where it may not have been essentially necessary. The second measure is *local* detraction of blood, by means of leeches applied in considerable numbers over the abdomen, and, if prejudice will permit, to the hæmorrhoidal or vaginal vessels. It is at the moment that the first case is experienced from general and local bleeding, that the mucous membrane of the intestinal canal is to be excited to copious secretion and complete detrusion of its contents. Here then we differ, *loto calo*, from Dr. Abercrombie.

“We have seen no reason (says he) to suppose that the retention of *feculent matter* was injurious in the one case, or that the copious evacuation of it was productive of the slightest benefit in the other. On the contrary, there are facts which must lead to a suspicion that the action of purgative medicine upon the intestinal canal when it is in a state of inflammation, rather tends to increase than diminish the disease.”*

Were we called to a man with a fixed pain in the abdomen, constipation of the bowels, gastric irritability, fever, and other symptoms indicative of enteritic inflammation, and *then* prescribe purgative medicines, without the preliminary and preparatory measures of general and local detraction of blood, we should expect the results which Dr. Abercrombie alludes to. But surely, this is a very insulated or oblique view of the subject. For what reason do we employ active purgation in the early stages of *thoracic* inflammation? To lessen the whole mass of circulating fluids, and reduce the general action of the heart and vascular system. That purgation does this, we appeal to clinical experience. Now, in abdominal inflammation, provided the *mucous* tissues are not

inflamed, purgative medicines excite the secreting vessels, not only of the whole internal surface of the intestines themselves, but of the glandular organs whose excretory ducts open into the primæ viæ, and thus powerfully deplete *locally*, the vascular system of the abdominal viscera.

When that portion of peritoneum reflected over the intestines is inflamed, but where the villous coat is unaffected, we hesitate not to assert, from personal experience, that constipation of the bowels will, in nine cases out of ten, be a feature of the disease; and in such cases we maintain, that to excite the natural action of the mucous membrane, immediately after proper vascular depletion, is a powerful mean of checking the said peritoneal inflammation; in the same way that a free expectoration from the mucous membrane of the lungs relieves the vascular turgescence and inflammation of the parenchymatous structure or pleural covering of the same organ, as every practitioner must have repeatedly remarked. And here we appeal to the experience of our professional brethren, whether they have observed that patients generally complain of aggravation of the symptoms after the operation of purgative medicines, as Dr. A. states? For our own parts, we have generally observed the reverse of this take place, when purgation was effected in the manner, and with the preparation above described.

Dr. Parr, the able author of the London Medical Dictionary, after thirty years' experience, states, that in enteritis

"The salutary termination is by a discharge of *sæces*. If this can be obtained, the patient is safe; but unless free, copious, and truly *scæculent* stools are procured, the most promising appearances, in every other respect, will deceive." *Dict. in verbo inflam. intest.*

It must also be remembered, that inflammation of the peritoneal and muscular coats of the intestines has a natural tendency to produce spasmodic contractions of their calibre, and thus lock up whatever fecal matters may be contained in the bowels, giving additional cause of irritation. The reduction of this spasmodic contraction by blood-letting, warm fomentations, clysters, or even narcotics, and the subsequent action of purgatives, all tend to relieve pain and check inflammation, as we have seen in numerous instances.

Dr. Abercrombie is neither singular nor original in his anti-purgative doctrines in peritoneal inflammations. Broussais thinks purgatives are only proper towards the close of the acute stage, "because the vermicular contractions which they excite in the intestines, must increase the morbid sensibility of the peritoneum." But knowing the inertness of the vascular depletion among our continental brethren. we cannot

attach much importance to their therapeutical precautions. Broussais admits the propriety of gentle anodynes, when the force of the reaction is a little subsided.

The success which has attended the administration of oil of turpentine in puerperal peritonitis, first recommended, we believe, by Dr. Brennan of Dublin, is a proof of the power of purgatives in this disease. The turpentine is not only a potent cathartic, but excites powerfully the whole mucous membrane of the intestines, and thus derives the morbid irritation from the peritoneal tunic to a secreting surface, where it is carried off by the increase of secretion itself. Oil of turpentine and castor oil form a very useful combination for exhibition in this disease.

By these observations in favour of purgative medicines, in acute peritonitis, we do not mean to lessen the absolute necessity for decisive vascular depletion, general and local, previously to their administration. On the contrary, we urge the propriety and priority of these means, recommending the use of purgatives as an auxiliary measure. Our usual practice, indeed, in this dangerous disease, is, first, to order general blood-letting till the pain is relieved, on pressure, or syncope produced; and while the local detraction of blood, by numerous leeches, is going forward, we order a grain or two of opium, or six or eight of extr. hyoscyami, combined with five or ten of calomel, and six or eight of ex. col. comp. to be taken. After the local bleeding, and a couple of hours after the above medicine has been swallowed, we endeavour to set the bowels in action, either by neutral salts, castor oil, or laxative injections. Reiterated observation has proved to us the utility of combining an anodyne with the first cathartic, and especially with the calomel, as it tends to prevent or allay gastric irritability, intestinal spasm, and irritation, thereby ensuring a more copious faecal evacuation afterward, than would otherwise be procured.

We observe in Dr. Gregory's MS. Lectures, the following passage, which is sufficiently in point.

"Small doses of the sal. glauveri are better than the common purgatives; but as salts seldom sit easy on the stomach in this inflammation, it is necessary to join an opiate, *which does not stop the operation of the purgative, as one would imagine*, but only keeps the patient from vomiting." MS. Lect.

Dr. Pemberton's sentiments respecting purgatives in enteritis, general and local blood-letting being premised, are as follow:

"If the stomach will bear liquids of any sort, a strong solution of magnes. sulph. in aq. menth. pip. with an addition of tinct. rennæ,

may be directed in such quantities, and at such intervals, as the sickness of the stomach will allow. If, however, all liquids are rejected, we may direct an usual dose of calomel, in union with the ex. col. comp. every six hours, ad quartam vicem. In the intermediate hours, an injection of water-gruel, with common salt, may be employed. Purgatives are to be continued during the whole progress of the disease." *Fourth Edit. p. 181.*

It is very strange that this able and experienced physician should not have noticed what Dr. Abercrombie considers as a common occurrence in enteritis—a natural state of the bowels, and aggravation of the complaint by purgatives. We believe, however, that Dr. Pemberton is not very singular in this respect. Dr. Abercrombie appears to be fast falling into the error of converting exceptions into general rules.

We agree with Dr. Abercrombie, that the first blood-letting should be as early as possible, and carried the length of making a decided impression on the system; and also that to prevent this advantage being lost, we should repeat the depletion, after a short interval, whenever the effect of the preceding one has subsided. If the venesection be thus *timeously* repeated, it will seldom require a large detraction to check the pain and inflammation; whereas, if the disease be allowed to acquire force in the intervals of depletion, it will not only require a large loss of blood, but that large loss itself will have less chance of bridling the inflammation than the timely small one, while it seriously reduces the vital energy of the patient. And this is an additional reason for keeping up a secreting action on the mucous membrane of the bowels, which saves the detraction of pounds of blood.

Dr. Abercrombie wisely cautions the practitioner not to lose sight of a patient with an inflamed vital organ more than an hour or two at a time, until the force of the disease be decidedly broken. Unless the violence of an internal inflammation be signally mitigated within the first twenty-four hours of active treatment, the eventual result will be very doubtful.

Dr. Abercrombie, and indeed the practitioners of this country in general, employ local blood-letting in abdominal inflammation with too sparing a hand. Not only should leeches, in great numbers, be applied over the abdomen, but to the anal and vaginal regions, the bites being encouraged to bleed as long as possible, by warm fomentations.*

* An able friend of ours, in the case of a very delicate female child, seven and a half years old, had lately fifty-five leeches applied to the abdomen, in the course of a very few days. The pulse, before the leeches were applied, could hardly be counted. After the first application of fifteen leeches, it fell

If conveniences are at hand, the warm bath should succeed general and local blood-letting, not only as a means of equalizing the circulation, but of lessening pain, and promoting the effect of the purgatives. If the warm bath cannot be procured, reiterated fomentations, with decoction of poppy heads, chamomile flowers, and a proportion of spirit, should be applied to the abdomen, which will not interfere with the bleeding from the leech-bites. Broussais recommends, in addition to the tepid bath and fomentations, gentle friction over the limbs, with the hand or some other body supple and agreeable to the touch.*

After the violence of the inflammatory action is subdued by general and local blood-letting, laxatives, and fomentations, or the warm bath—*blisters* are important auxiliaries. Broussais recommends the first blisters to be applied to the thighs or legs, in order to keep the surface of the abdomen clear for leeches and fomentations; but when the acute stage is declining, or if the other measures seem to fail, then we are to cover the abdomen with a blister. We ourselves have not hesitated to blister the abdomen, as soon as a decided impression was made on the disease, by the other and more essential measures. Leeches, if subsequently necessary, may

to 140, with frequent intermissions, both then and subsequently. When the violence of the disease was broken, the pulse remained five days, viz. from the sixth till the eleventh of April, stationary at 112. At this time, an ounce of castor oil produced several motions, in which were some olive-coloured lumps that appeared to have been long retained. The pulse now fell below 100, for the first time since her illness, "evidently showing (says he) how important a free state of the bowels is; for the pulse has risen or fallen, according as the bowels were confined or free."

* Dr. Hall, of Berwick, in a Letter to Dr. Dickson of Clifton, on the subject of peritoneal inflammation, observes, "in all active inflammations of this kind, the suddenly emptying the blood-vessels, generally affords such relief at first, as to give time for topical applications being afterward made with advantage. I have found benefit from small doses of ipecacuan joined with calomel, where the alvine discharge is slow, provided the stomach is not in an irritable state; in which case, the addition of ol. ricini to a common enema, often answers the best purpose."

Dr. Dickson himself, in a letter to the writer of this article, observes, "I think it of the highest import, towards conducting the disease to a safe termination, to keep the bowels freely open by mild means, and by frequent injections; for I have repeatedly remarked the pulse to fall after a copious motion." He justly advises, of course, that the force of the inflammation be previously broken by decisive blood-letting, as we have already inculcated.

Dr. Pemberton, in his valuable work, states, "it is necessary that the bowels should be kept constantly open." He recommends castor oil or neutral salts.

be applied, with great advantage, to the flanks of the abdomen, and to the anus.

Of the cold applications recommended by Dr. Abercrombie, Dr. Kinglake, and several French writers, we have not any experience.

"In a considerable number of cases (says Dr. A.) I have used, with evident advantage, the application of cold, by covering the abdomen with cloths wet in cold water or iced water, or by pounded ice in a large bladder."

The authorities for tobacco injection, in inflammation of the bowels and ileus, are exceedingly numerous, as the reader will perceive, by looking into Plouquet, (vol. v. p. 117.) where, among others, De Haen and Fowler have recommended the measure. Without much experience in this remedy ourselves, we are disposed to unite with Dr. Abercrombie, in proposing to revive its use as a powerful auxiliary in the disease under consideration.

"The great advantage (says Dr. A.) attending the use of it in enteritis is, that while it tends to move the bowels, and keep them free from distention, it is, at the same time, powerfully calculated [he ought to have said, "calculated powerfully"] to allay vascular action, and may thus assist in keeping down the inflammation."

Mr. Howship, in his late work, mentions his having seen three cases, "in which the patients had suffered extreme pain in the region of the bowels, and in which the prescriptions of physicians had availed nothing. Mr. Heaviside being consulted, and finding that the stomach had rejected every thing taken, and that stimulating clysters produced no favourable effect, in despite of bleeding, warm bath, and almost every other means, desired Mr. Howship to try the fume of tobacco, injected cautiously, by the proper apparatus. A general commotion and rumbling noise in the bowels took place in all these cases, and were soon followed by copious evacuations of fæcal matter. The patients were saved."—*Practical Observations, &c. p. 19.*

Of the sedative effects of antimony on the vascular system, we dare not avail ourselves in abdominal inflammations, on account of the gastric irritability; but Dr. Abercrombie recommends the free use of digitalis, in cases where the pulse continues frequent after the local symptoms appear considerably subdued by bleeding, and consequently where there is danger of relapse.

A tympanitic state of the abdomen is certainly a formidable symptom in enteritis, and a very unfavourable omen. We have seen it, however, owing to a sudden extrication of gaseous fluid within the intestines, and removed by aromatics

friction, and assafoetida injections. Dr. Abercrombie has seen injections, with large quantities of cinchona, very useful.

There is a period, in some cases of abdominal inflammation, where the disease is just subdued, but where there is a kind of balance between recovery and gangrene. The pain will vanish, the pulse become weak, the vital powers appear to sink, and a coldness overspread the body. These symptoms are too often indicative of mortification; but every experienced practitioner must have occasionally witnessed cases of recovery, even from this alarming state. Here we must give wine; for if gangrene *have* commenced, no harm can ensue from the remedy; and if it *have not* commenced, the wine may happen to give a salutary stimulus to the nervous and vascular systems, when stagnation is on the point of taking place in the vital fluid; and where farther evacuations would be instant death. In some cases of this kind, however, the symptoms are so equivocal, as to render it exceedingly difficult to determine on the proper course to pursue.

"A lady, (says Dr. Abercrombie) aged about 35, on the seventh day after delivery, was seized with violent pain over the whole abdomen, most severe across the stomach and towards the right side; much tenderness on pressure; urgent vomiting; great restlessness; respiration short and oppressed; pulse 140, and sharp. The pain was aggravated by inspiration, and by every motion of the body. She was bled and blistered, and took laxative medicine, which operated freely. After the bleeding she was very much relieved; could breathe without uneasiness; the vomiting subsided, and the pulse was much diminished in frequency: this was in the night. On the following day the pulse rose to 150; the breathing was quick, short, and oppressed; some vomiting; countenance anxious; there was neither pain nor tenderness of the abdomen, which was to the feel soft and natural; lochia natural. Wine was given in the quantity of a small glass every hour, and injections of beef tea, each containing $\frac{3}{4}$ ss. of bark in powder, and sixty drops of laudanum. These were repeated as often as they were discharged, which was generally from one to two hours. After some hours the symptoms were improved. Next day the pulse was from 125 to 130; on the third day from 112 to 120. Thus she gradually recovered, having continued to take a bottle of wine in each twenty-four hours." *Ed. Journal, April, 1820.*

It is hardly necessary for us to observe, that the strictest antiphlogistic regimen is essential throughout acute peritoneal inflammation. Saline draughts, in a state of effervescence, will be useful in allaying thirst and gastric irritability—and when food is necessary, the farinaceæ should long precede animal food, or any other kind of ingestion which produces much fecal remains. Rice water for drink is

very useful in convalescence, as it is nutritious but not stimulant; and as this disease leaves a strong tendency to relapse, the patient should be enjoined the strictest attention to abstemiousness, regular bowels, warm feet, and flannel next the skin, for a long time after every symptom has disappeared.

Treatment of Chronic Peritonitis. In the first edition of M. Broussais's work, he appears to consider chronic peritonitis as incurable; and M. Gasc, the writer of the article peritonitis, in the *Dictionnaire des Sciences Medicales*, gives a similar prognosis—"on peut dire que la péritonite chronique est presque toujours mortelle." Within the last twelve or fourteen years, however, M. Broussais has met with several cases of this disease which terminated favourably. He justly observes, nevertheless, that in many instances, chronic peritonitis is supposed to be cured when the disease is merely dormant for a time, and pretty sure to advance again with hasty strides. M. Broussais gives a satisfactory explanation of the general incurability of the disease; namely, that tuberculous and pultaceous matter is commonly deposited, during chronic inflammation of the peritoneum, between the layers of this membrane, or in the substance of the false membranes thrown out on its internal surface, which depositions appear to be incapable of absorption; and, consequently, keep up an irritation which feeds the disease. This tuberculous matter may, for a time, lie dormant, or create little inconvenience; but ultimately, it kindles up irritation and inflammation. It is difficult, however, to know the exact period when these extraneous matters are deposited, and therefore we should not be too abrupt in giving an unfavourable prognosis. M. Broussais thinks, that a patient's fate, in general, depends on the treatment during the first twenty or thirty days of the disease, though he does not deny that it is curable at a much later period. Indeed, where chronic peritonitis steals on, without having been preceded by the acute form, it is seldom we see the complaint during the period above mentioned.

In respect to the treatment, our first object is to ascertain if there be any remains of the acute or sub-acute forms of the inflammation; for, in that case, we must still employ a modification of remedies already described. And, indeed, where no acute peritonitis has preceded, we are to be ever on the watch for a supervention of such a state; and ready to combat it by active means.

Our next object is to lessen or soothe irritation and pain, which aggravate the disease and accelerate its march. The food should be of the very lightest kind, so as that but few

fæces may be formed, and those should be daily carried off by the gentlest means, particularly by laxative clysters. It is evident that when coagulable lymph has been thrown out, and adhesions have taken place between the intestines themselves, or between them and any other parts, the action of purgatives must be productive of serious mischief. The case is here totally different from acute inflammation of the peritoneum, and before any disorganizations have taken place.

In this chronic or pyretic peritonitis, we must endeavour to arrest the morbid process going forward internally, through the medium of the skin. The tepid bath, fomentations, stimulating frictions, blisters, or even issues, should be successively employed, with or without leeches, according to the activity or inactivity of the internal inflammation.

As a serous effusion is a common consequence of this dangerous disease, and is ever to be dreaded, *diuretics* are important remedies, particularly the digitalis, united with some gentle saline aperient, as the acetate of potass, or soda tartrazata.

The following will be found a very powerful diuretic in many cases besides that immediately under consideration.

R. Acidi tartarici ℥j.
 Sodæ carb. gr. xxiv.
 Infusi digitalis fl. ℥ss.
 Spir. ætheris nitrici . . fl. 3j.
 Tinct. scillæ m. iv.
 Aquæ menthæ ʒij. M. fl.

Hauftus bis terve in die sumendus.

Broussais strongly recommends the introduction of diuretic medicines, as the tinct. lyttæ, and tinct. scillæ, by means of friction on the skin, aided by gentle laxatives internally. It is needless to observe, that the most perfect quietude is necessary in this complaint; perhaps, however, a sea voyage, from its known effects on the absorbent system, and a change to a warm climate, might be useful here. Anodynes must be exhibited; but they should be such as produce the least constipation, as hyoscyamus, conium. &c. If opium be used, it must be combined with laxatives. Without asserting that the disease under consideration is *identical* with what Dr. Baron has described, under the term "tuberculated accretions of the serous membranes," in his valuable work on that subject, we may at least be permitted to consider the two affections as very *analogous*; and under this idea the plan of exciting to absorption by nauseating medicines. as recom-

mended by the illustrious Dr. Jenner, in the work alluded to,* is highly deserving of a trial, in so intractable a disease. There can be little doubt, indeed, that the absorbments might be made to act upon many extraneous and morbid growths in the human body, by *rigid abstinence* alone, if patients had fortitude to persevere in the measure. For our own parts, we should place more confidence in this than in any other remedy; and practitioners should at all times bear in mind, that without strict abstemiousness, there is little hope of a cure in chronic peritonitis.

We shall now introduce a few examples of the acute and chronic forms of the disease under review, from M. Broussais, which will afford ample food for reflection to our readers, and give us an opportunity of making some incidental remarks of our own.

Case. Acute Peritonitis simulating low Fever.

"A man, 26 years of age, large stature, and robust, entered the hospital of Medenblich on the 4th fructidor, with an air of great suffering, livor of countenance, sharpness of the features, parched tongue, delirium, constant jactitation. He complained of nothing; but the abdomen was tender on pressure, pulse quick, depressed, and feeble. These being the features of low (*staxique*) fever in the last degree, I could only prescribe tonics and antispasmodics for the night.

"Next day, (10th of the disease) about one o'clock, the abdomen became intolerably painful, and the patient could not bear the slightest pressure without making great complaint. *A lavement, emollient fomentations.* No relief. The patient got into a convulsive agitation, uttering piercing cries. The warm bath for three quarters of an hour, in which time several spoonfuls of an antispasmodic potion, with laudanum and ether. After coming out of the bath he was easy and tranquil, the pulse fuller, and the skin soft. He could now give some account of his complaint. In the vessel on which he embarked at the Texel, he became affected with some gastric symptoms, followed by nausea, cold chills, and malaise. A vomit was given him, during the operation of which, he first felt the pain in the abdomen, which had never since ceased. I now perceived that the disease was peritonitis, and prescribed *leeches, fomentations, and diluents.* The evening was calm, and only a little sensibility on pressure of the abdomen remained.

"Next day, (11th of the disease) the abdominal pains renewed, with restlessness. *Fomentations.* The warm bath was attempted, but the pain was so great that he could not be put into it. Constant tossing about during the remainder of the evening, with ex-

* See also our *Quarterly Series*, No. 6, for October 1819.

quisite tenderness of the abdomen. I was deterred from again leeching the abdomen, by the sinking of the countenance, and weakness of the pulse; indeed, I judged that the process of disorganization had commenced. *Anodynes.*

"The day following, all was calm, and he said he was 'very well;' but he died in the evening.

"*Dissection.* Corpse extremely muscular. Vessels of the head a little injected, with some serous effusion. Peritoneum red, covered with sanguiferous vessels, and thickened to a line or a line and a half, particularly over the intestinum ileum, where there were several black spots. The peritoneal covering of the mesentery, omentum, and ileum, was coated with a solid exudation of a whitish yellow colour, strongly adherent. The muscular and mucous coats of the intestines sound."

M. Broussais observes, that at the period when this patient arrived under his care, no measures would probably have saved him. We do not agree with him. We are sure that the *symptoms* authorized *general* blood-letting as well as local; together with intestinal evacuations; and we are disposed to think, that under the energetic treatment of this country, the patient might have been saved. At all events, the *methodus medendi* was here as bad as it possibly could be, and dissection evinced the inefficacy of nature, or the "*medicine expectante*," in counteracting peritoneal inflammation.

We agree with M. Broussais, indeed, that in the above case, the emetic was injudicious, nay injurious; and well may our author exclaim, "*Si les nausées qui décidèrent l'emploi du vomitif dépendaient d'un principe de péritonite, combien le malade est à plaindre qu'on n'ait pas les interpreter!*" *Vol. II. p. 408.*

The following case is well worthy of every practitioner's attention.

Case. Acute Peritonis simulating Spasmodic Colic.

"Bongeot, *etat.* 39, robust and athletic, entered the hospital of Udina, the 7th of August, 1807, for the treatment of violent colic, with which he had been tormented during nine preceding days. He had a dull but constant pain in the abdomen, exasperated every night, and for which he had taken, without relief, spices, wine, lavements, and various stimulants. He was affected frequently, during the above period, with vomiting, and the constipation was invincible

"He had now a countenance indicative of suffering, a flush on the face, contracted pulse, no way frequent, and rather feeble than strong, with little heat of skin, no abdominal distention, and but little tenderness on pressure. I prescribed 'la solution Gommense

acidulée et des juleps anodins,' with some amelioration of the symptoms.

"8th. This day passed with some little malaise, a sense of painful fulness in the belly, and no appetite. Same treatment.

"9th. The obstinacy of the constipation appeared to demand some evacuants. Tamarind decoction. Great increase of pain, and restlessness, but no fever. No stool. *No medicine, but mucilaginous drink.*"

The complaint went on gradually increasing for some days, with a developement of fever, and at length M. Broussais opened his eyes, and saw that he had peritonitis to deal with! *Fomentations, six leeches to the margin of the anus.* Great reduction of the symptoms, and tranquil night. But the next morning brought a renewal of all the symptoms, with fixed and constant pain in the abdomen, which was increased every night to horrible tortures. Emollients: repetition of the leeches to the anus and lower part of the belly. In short, he dragged out a wretched existence till the 19th of August, without the least *active* measure being taken by M. Broussais, the most *active* and energetic physician in all France!

"*Dissection.* The corpse very fleshy and muscular; all the muscles in a state of rigid contraction. Chest sound. *Peritoneum* red, and thickened throughout its whole extent, and covered, in some places, with a whitish exudation. There was a small quantity of serous effusion in the abdomen. The mucous membrane of the *stomach* appeared red; but that of the intestines was perfectly healthy." 412.

It is really too bad to hear M. Broussais throw the blame here upon the *tamarind decoction*! "on la voit, d'abord obscure s'accroître prodigieusement par l'effet d'un purgative."(!) M. Broussais even outstrips Dr. Abercrombie in his condemnation of purgatives in peritoneal inflammation. "Les purgatifs seraient presque aussi pernicieux que les vomitifs, dans cette maladie." But we beg Dr. Broussais's pardon when we say, (and indeed without taking much credit to ourselves) that we would have saved Bongeot's life, by bleeding and *purging*. These cases, however, are invaluable to the profession. They teach us what may be *done*, by exhibiting what has been left *undone*.

The above case is valuable in another point of view. It proves to us that acute inflammation of the peritoneum may exist in a very high degree, and accompanied by great pain, without any febrile movement in the general vascular system.

M. Broussais here relates an interesting case of what he denominates "*acute hæmorrhagic peritonitis.*" A soldier 28 years of age, athletic, and a great eater, had, for some time,

been subject to attacks of pulmonic inflammation, with slight hæmoptyses. About the middle of September, 1800, he became affected with some general febrile symptoms, for which the surgeon of the place prescribed an emetic, as he considered it "*la fièvre du pays*." During the operation of the medicine, the patient experienced a very violent and deep-seated pain in the left hypochondre, after which the fever became strongly developed.—On the 17th he took a purgative, and on the 18th was calm, and sent to the hospital of Udina; where, being seen in the evening by a physician, he appeared in such a state of debility and exhaustion, that antispasmodics and light nourishment were ordered.—19th. A deceitful calm; weakness; cold chills.—20th. Calm in the forenoon; but towards evening, violent fever, great anxiety, severe pain in the side, spreading all over the abdomen, respiration laborious, cold sweats. Death in the night.

"*Dissection.* Nothing remarkable in the head or thorax. The cavity of the peritoneum filled with clots of blood, which were spread in sheets over the principal viscera. Spleen vastly distended with blood. On a more accurate investigation, the cellural tissues beneath the peritoneum, and between its duplicatures, were black, and injected with blood."

Case of Chronic Peritonitis.

"A young soldier entered the hospital at Nimeguen for an affection of the testicle. Some time after his arrival he experienced a gastric affection, which induced the surgeon to order him an emetic; during the operation of which he felt pains in the abdomen, that continued in spite of various sedatives. To these were added vomiting, dysury, and fever; on which account he was turned over to the physician's wards, where M. Broussais found him, two months after the commencement of the complaint.

"He was now wasted, pale, and affected with cough, unaccompanied by expectoration. The abdomen was distended, and painful to the touch; the patient also experienced constant cutting pains in the belly. Vomiting of every thing taken, and aggravation of all the symptoms after eating any thing of an irritating nature; difficulty of making water; pulse frequent, hard, and contracted; exacerbation of heat, fever, and pains in the evening. M. Broussais pronounced the disease to be incurable, and merely prescribed diluent and anodyne drinks. He died about three weeks afterward, in an advanced stage of marasmus.

"*Dissection.* Some adhesions in the chest; but the substance of the lungs sound. The abdomen contained a considerable quantity of milky serum. The peritoneum was red, granulated, and, in many places, four lines in thickness. Over its surface were scattered small fragments of a whitish exudation, unorganized, and, in a great measure, dissolved in the abdominal effusion. The liver

was enlarged, and resembled granite when cut into, interspersed with tubercles. The mucous membrane of the intestinal canal and stomach perfectly sound." *Vol. ii. p. 435.*

The following case will show us, that chronic peritonitis may be going on for some time without much derangement of function in the digestive organs.

"Case. Nomin, a soldier, 27 years of age, formerly stout and muscular, entered the hospital of Udina, on the 23d of January, 1807, in a state of advanced marasmus, with pain and tumefaction of the abdomen; which, together with the whole surface of the chest, was morbidly sensible to the touch. Face expressive of great sufferings; constant cough, with expectoration; pulse frequent, sharp, and not strong. He stated, that four months previously, he had been attacked by a quotidian ague, during the first eight days of which, he became much swelled about the body, which he attributed to the quantity of water he had drunk in the hot fits. He was treated at the hospital of Treviso by a continued exhibition of bitter wine; and at the expiration of two months and three days he was discharged, apparently cured. But a fortnight after he left the hospital, he became affected with a pain in the side, about the region of the spleen, accompanied by a diarrhœa. This diarrhœa continued obstinate, with fever, emaciation, and cough; and in about a fortnight from this relapse he died.

"Dissection. The pleura pulmonalis and p. cost. slightly adherent by means of a whitish unorganized exudation, and about a pint of serous effusion in the left cavity of the chest. Parenchymatous structure of the lungs sound. The peritoneum a little thickened, and lined throughout with the gelatino-albuminous exudation above-described in the thorax. The whole of the abdominal viscera, without exception, were covered with this production, which served to glue them slightly together. No serous effusion. The mucous membrane of the stomach was a little red, and some reddish patches were observable on the mucous surface of the small intestines, and also of the colon, but without any ulceration." 437.

In the following case, we imagine, Dr. Baron will recognize an instance of the disease on which he has lately written. It presents also a complication of peritoneal inflammation, with phlogosis of the mucous membrane of the intestines.

"Pierrott, 22 years of age, perceived, about the middle of July, 1806, a swelling of the abdomen, succeeded by much flatulence, and by diarrhœa, together with pain. These continued a month, when he was obliged to quit duty and enter the hospital of Udina, where he had twenty or thirty stools per diem. The diarrhœa was mitigated for a short time by ipecacuan; but it returned again, and now the patient came under the care of M. Broussais. The patient, at this time, had frequency of pulse, heat, diarrhœa with tenesmus, obscure but permanent pains in the abdomen, with flatulent distention, tenderness on pressure, in the line of the ascending colon.

Rice water, demulcents, &c. with anodynes, and rigidly low diet. By these means the diarrhœa was checked, and the febrile heat reduced in a month; but whenever the nourishment was increased, or tonics given to recruit the strength, then the fever, bowel complaint, and pains of the abdomen returned. The low regimen was therefore again persisted in for six weeks longer; but in spite of all this, there continued a dull pain in the abdomen, especially when lateral pressure was applied; and the abdomen was evidently more protuberant than it ought to be. Tired of the hospital, he was sent to his corps (exempted from duty) from the 15th of November till the 5th of January, when he returned to M. Broussais in a state of advanced emaciation—the skin of an earthy colour, the belly somewhat prominent and hard, the pulse very frequent, but not much febrile heat. He said he felt painful twistings in the abdomen, with a sensation as though some globular body was ascending to his throat.* He was still affected with diarrhœa. Death put an end to his sufferings on the 12th of January.

“*Dissection.* Excepting some old adhesions and a few incipient tubercles, there was nothing particular in the lungs. *Abdomen.* All the viscera bound together by the disease of the peritoneum, which membrane was thickened, discoloured, and formed, with the diseased epiploon, a dense covering, through which were scattered a multitude of tubercles, filled with whitish matter. On the intestinal peritoneum these granulations resembled variolous pustules. The mesentery was morbidly thickened, and its glands tuberculous.

“The mucous membrane of the stomach was a little red, but only in detached patches; the internal surface of the small intestines little affected; that of the colon was generally red, with ulcerations of greater or less extent. The liver sound, the spleen somewhat tuberculated. On the surface of the diaphragm several tubercular productions as large as a pullet’s egg.” 450.

We suspect that many cases of what is called *common ascites* would, upon minute investigation, present phenomena analogous to the following.

Case. Chronic Peritonitis, with Dropsical Effusion.

“Boulard, a fusilier in the 35th regi. a man about 30 years of age, stout and muscular, having got cold, by exposure to rain at the siege of Ulm, became suddenly leucophlegmatic. The dropsical effusions, however, gave him so little uneasiness, that he kept at his duty during the winter campaign in the mountains of Styria and Carinthia. In March, 1806, four months after the exposure above mentioned, and the commencement of his complaint, the dropsy forced him to enter the hospital of Udina.

“He had now general anasarca; complained of no particular pain; had only a little malaise and dyspnoea, with some cough at night. Pressure on the abdomen caused no pain, unless it was very strongly made, and then it was so obscure and confused that no indication could be drawn from it, since strong pressure on the

abdominal viscera gives uneasiness at all times, even in health. The patient had no fever, an excellent appetite, the complexion unaffected, and, in short, there was reason to hope that the disease might be idiopathic dropsy. By a proper employment of aperient and diuretic medicine, the dropsical effusions were almost completely evacuated in three weeks; but the medicines gradually lost their effects, the dropsy returned, and the patient finally sunk on the 6th of April, 1806, about five months from the origin of his ailments.

"Dissection." The lungs much pressed upon by the protuberant diaphragm, and somewhat engorged; but no disorganisation of structure. Abdomen filled with a whitish serum; the peritoneum thickened, non-transparent, and almost every where lined with a white, pulpy, and easily separable exudation. The mucous membrane of the intestinal canal sound throughout."

The above state of the peritoneum is doubtless the cause, in numerous instances, of those obstinate relapses which occur, from time to time, in cases of ascites. But dissection is too little attended to in death from dropsy. An important practical indication, however, may be deduced from these researches; namely, that where no abdominal viscus appears obstructed in ascites, we should examine minutely into the state of the peritoneum, and generally suspect some inflammatory action in that extensive membrane. Much might probably be done by leeching the abdomen, and blistering, while evacuating the collected effusions by diuretics and aperients.*

We shall extract but one more case of this disease, and may it prove a useful beacon against the dangerous doctrines of *debility*, on which even a Broussais has too often been wrecked!

"Case." Pagnet, 22 years of age, a fusileer, in the 84th regt. received a wound in the foot; for the cure of which he entered the hospital of Udina, and remained there three months, with the following symptoms. From the time of his entrance he complained of pain in the belly, which was very tense, while the aspect of his countenance evinced that he had been unwell for some time. The wound of his foot would not heal, but remained stationary in spite of every thing they could do. He had evening fever. Tonics and stimulants always made him worse, and frequently nauseated his stomach. About the middle of May, fifteen days before his death, Pagnet complained that the pains in the abdomen, which had hitherto been of a dull obtuse kind, were now become acute; and, in a short time, they became so aggravated that the weight

* See our Review of Dr. Crampton's excellent paper on dropsy, in No. 6. Quarterly Series.

of the bed-clothes was insupportable. Fever was now strongly developed, with burning heat, and much fætor of all the excretions. The stomach would not retain any thing, and he was harassed to the moment of his dissolution, with the most excruciating sufferings and ardent fever. '*Il souffrait continuellement des douleurs horribles, et était dévoré par une fièvre ardente qui, par sa violence, paraissait fort au dessus des ses forces.*'"

It does not appear that any depletory measures were put in force, at any period of this wretched man's complaint! The following ravages of inflammation are coolly detailed, without M. Broussais's appearing to even dream that there was the least mismanagement of the case!

"*Dissection.* Evidence of universal peritonitis, with a concrete exudation, while a black, purulent sanies, of stercoraceous fætor, filled all the intervals which the adhesions had left. The intestines were sphacelated in numerous points, and perforated like a sieve in many places. Through these perforations, fæcal matter and intestinal gases had passed into the cavity of the abdomen. The mucous membrane of the bowels was sound throughout, excepting at the places where the perforations were situated." 482.

It is totally inexplicable how our continental brethren can see these things, and accurately describe them, without, in the smallest degree, profiting by the results of their pathological labours! If they *will* continue blind to the light of truth, let us profit by their oversights. These pathological specimens could not occur in Great Britain; but they are most invaluable, as establishing the solid basis on which the energetic practice of this country, in acute diseases, rests.

It is now time for us to close this article. We have endeavoured to form a focus, whereby the rays of light, from various quarters, might be made to converge on a single point, and illuminate an important subject. Should our labours meet the approbation of the profession, we shall continue them, while health and life are spared, until this Journal shall become a depository of medical illustrations that may render it a useful and authentic source of reference, on all the leading points of pathology and practice. If TIME should confirm these (we trust) laudable anticipations, it will hereafter cheer the gloom of ebbing life, to reflect that we have not lived in vain, nor suffered the vigour of manhood to pass without contributing our quota to the mighty impulse which guides the march of human knowledge at the beginning of the nineteenth century.

II.

Cases of a serious morbid Affection, chiefly occurring after Delivery, Miscarriage, &c. from various Causes of Irritation and Exhaustion; and of a similar Affection unconnected with the Puerperal State. By MARSHALL HALL, M.D. F.R.S.E. &c. &c. Octavo, pp. 88. London, 1820.

THE line which separates spasm and irritation from inflammation, is often so obscure, that the man who could lay down an accurate diagnosis on this subject, would do a very great service to the medical profession. We believe it is a maxim pretty generally acted upon in practice, to treat a disease as inflammation, when we are in doubt whether it be or be not spasm. This, upon the whole, is a safe rule; but cases occasionally present themselves, where it is little less destructive to bleed in irritation, than to stimulate in inflammation. It appears to be the object of Dr. Hall, whose talent for observation and power of discrimination are well known, to draw the attention of his brethren to the above-mentioned cases, by a plain record of facts. The motto which he has prefixed to his work, taken from Dr. Denman, is very appropriate, and is as follows:

“When the puerperal fever of a true inflammatory nature exists, I feel I am right in the opinion I have advanced respecting bleeding. But as it is sometimes EXTREMELY DIFFICULT TO DISTINGUISH BETWEEN THIS FEVER AND COMPLAINTS PROCEEDING FROM MERE IRRITABILITY, which far more frequently occur, especially in very delicate habits, and among women of high rank; and as all the complaints arising from irritability would at this time be INCREASED BY BLEEDING, AND RENDERED DANGEROUS BY A REPETITION OF IT, I recommend, in the strongest terms, that we should be ACCURATE IN OUR DISTINCTIONS before we determine on a plan, on our reliance and pursuit of which, the good of our patient may so essentially depend.—*Denman's Midwifery.*”

Upon the above passage, from Dr. Denman, we will only remark, that it is not very probable we shall be “accurate in our distinctions,” where it is “extremely difficult to distinguish.” This remark is not meant to deter from the attempt at diagnosis, but to show how easy it is to recommend on paper, what is scarcely possible in practice.

The morbid affection which forms the subject of the following work has, Dr. H. thinks, been unaccountably neglected by authors who have written on midwifery and puerperal diseases, a circumstance the more extraordinary, if the statement of Dr. Hall be correct: “namely, that the morbid af-

fection in question constitutes a great proportion among puerperal cases, and a great majority among the fatal ones, and of these fatal cases, many are daily rendered so by a mistaken use of the lancet."

This is a very strong statement; and we are tempted to believe, that it results from experience in a peculiar locality, such as Nottingham, where sedentary habits, poverty, and the depressing passions, operate powerfully in rendering the constitution remarkably irritable, and unable to bear that vigorous system of depletion which, under other circumstances, has been found so necessary in arresting the progress of puerperal affections. We throw out this hint, not in opposition to Dr. Hall's inferences, but to put our brethren on their guard, and to induce them to study well the constitutions of their patients, and their habits of life, before they implicitly adopt our author's conclusions, however legitimately they may be drawn, under the circumstances in which he is placed.

Dr. Hall observes, that whilst this affection arises from various sources of irritation and exhaustion, it is apt to produce symptoms resembling those of increased action, prompting to evacuations which, exasperating the disease, lead to still bolder measures of depletion, and, in some instances, to the destruction of life. As the puerperal state is peculiarly liable to causes both of irritation and inflammation; and as the symptoms of these are very similar, while their nature and treatment are different, the subject, from this consideration, acquires great interest. Dr. Hall deprecates the idea of inculcating the neglect of blood-letting, in cases of actual inflammation—his object is to institute a rigid diagnosis—"and the greatest vigilance in regard to the effects of bleeding, should this measure be once instituted." vii.

1. *Etiology.* The principal source of irritation, is a disordered and loaded state of the alimentary canal; that of *exhaustion*, uterine hæmorrhagy. The disease is more particularly apt to occur in females whose bowels had been in an irregular state, whether from constipation or diarrhœa, prior to delivery. It is frequently, according to our author, induced by copious or protracted uterine hæmorrhage, menorrhagia lochialis, long-continued lactation, sickness, copious venesection for other complaints, misapplied blood-letting after confinement, and the violent operation of purgatives.

It is most prone to attack the delicate and feeble; being aggravated, or even induced by closeness and warmth of the patient's room, the fatigue of lingering labour, anxiety of mind, alarm and hurry.

II. Symptomatology. When *acute*, the first symptom is usually a severe and protracted rigour, succeeded by a hot stage, "and some serious affection of the head or abdomen. When the attack is slower and more insidious, the rigour is less observable, the heat of surface is absent perhaps, and there is throbbing pain of the head, with vertigo, when in the erect posture, or fluttering and palpitation of the heart, or oppressive, hurried, and sighing respiration, or irritability of the stomach and bowels."

Of the two principal causes of the disease under review, intestinal irritation and uterine hæmorrhage, the *former* more commonly produces pain of the head, side, iliac regions, loins, or some part of the abdomen; the *latter*, faintishness, gasping for air, jactitation, sense of sinking, &c.

"But, besides that these two causes generally coexist, and co-operate, it is remarkable how similar, in general, are their effects. They each seem liable to attack ALL the organs and functions of the body, conjointly or separately. It is, however, in general, the circumstance of EXHAUSTION, which adds REAL DANGER to the otherwise URGENT but LESS SERIOUS symptoms of IRRITATION." xivii.

The symptoms which may be referred to the HEAD, are severe pain, beating and throbbing, vertigo, intolerance of light and noise, wakefulness, starting from sleep, with faintness, and sense of impending dissolution; sometimes delirium.

When the HEART is affected, its functions are, of course, disturbed, and all kinds of irregularity in the circulation ensue.

III. Terminology. This disease (for which we have no other name than "puerperal affection") sometimes terminates in sudden and unexpected dissolution.

"Is it not, (says our author) in fact, by this complaint that the nation has been bereaved of a princess on whom every hope and heart was fixed, and has been plunged into lasting mourning?"

Sometimes the affection terminates fatally, after a more or less urgent or protracted course. "Lastly, this affection has frequently yielded favourably to the resources of art;" which Dr. H. is happy to say, was almost invariably the case, when the plan of treatment, hereafter to be mentioned, was pursued.

IV. Diagnosis. It is most apt to be mistaken and mis-treated for inflammatory diseases of the head, chest, heart, stomach, bowels, uterus, and peritoneum; but especially for puerperal fever and puerperal phrenitis. This fact, our author thinks, may tend to explain the discrepancy of opinions respecting the treatment of puerperal fever by blood-letting. For the *diagnosis*, Dr. Hall refers us to the symptomato-

logy already detailed ; but on reperusing the selections which Dr. H. alludes to, we confess that we are unable to state what the diagnostics are. We are, therefore, fully agreed with our author in the following sentiment.

"The diagnosis may frequently be attended with difficulty ; there will often be occasion for the most careful and anxious watching, and for the utmost prudence in the administration of remedies, and in the observation of their effects." xxvii.

Where blood-letting is had recourse to, the effect of the measure must be rigidly observed, and early faintness, increase of frequency in the pulse, gasping, feeling of dissolution, or unremitting pain, must render us cautious how we proceed.

"In all cases, the colon and rectum should be unloaded by enemata. This measure affords a source of diagnosis of the utmost importance, in the relief it confers, and in the opportunity it gives for the observation of the state of the intestinal canal." xl.

V. *Treatment.* This consists, very properly, in removing the causes, and obviating the effects of irritation or exhaustion. Intestinal irritation must be removed by aperient medicines and enemata. Small doses of calomel, and draughts, with rhubarb and sulphate of magnesia, are the best aperients, according to our author's experience.

"One point is of the greatest importance ; it is the union with the purgative, of a proper dose of opium, or of a stimulant medicine ; and a point of little inferior importance, is the administration before, during, and after the action of the purgative medicine, of proper nourishment. With the calomel, I have given a small quantity of opium, and with the rhubarb and sulphat of magnesia, a little of the tinctura cardamomi comp." xliv.

Dr. Hall finds it impossible to say too much in recommending enemata. By their means the intestine is unloaded effectually, and without the exhaustion experienced from the action of efficient purgative medicines, or the danger of disordering the stomach.

"It is, in the next place, necessary to notice the means for obviating the various sources of exhaustion. If this be uterine hæmorrhagy, the following application is, I think, most effectual in arresting it. A lotion is prepared by dissolving from one to two drachms and a half of sulphat of zinc in a pint of soft water ; a scroll of linen is then made of a proper form and bulk to fill the vagina ; this scroll is then fully imbued with the lotion, introduced into the vagina, and renewed frequently. The same lotion may also be applied externally." xlv.

The other remedies which our author found useful were tinct. opii, tinct. camphoræ compos. the spir. ammoniæ aromaticæ, ether. wine. and similar remedies. A proper com-

bination of these remedies induces quiet sleep, prevents the exhaustion which would otherwise ensue from the administration of purgatives, and relieves many distressing symptoms. Gentle unirritating nourishment must, of course, be given ; as chicken broth, arrow root and milk, in small quantities, every hour, or oftener.

Such is the general treatment ; but what is to be done in the case of severe local affection and pains ? When the head is much affected, Dr. H. recommends cold lotions to that, and hot fomentations to the feet. He thinks leeches may sometimes be necessary, "when the complaint is the effect of irritation ; but they can only palliate." When the head is affected from *exhaustion*, even leeches are hazardous, and venesection ought, he thinks, to be prescribed. When the abdomen is the seat of the disease, "enemata, purgative and opiate, fomentations of the part and of the feet, liniments, and leeches, are the remedies of greater efficacy as well as safety." Venesection, in these cases, aggravated the pain, and proved hazardous to life.

"In the attack of jactitation, of oppression of the breathing, of palpitation, of faintishness, &c. a draught with tinctura opii, sp. ammoniæ aromat. opening the door and window, fanning, bathing the temples with vinegar, the smelling bottle, and aromatic vinegar, are all important." lii.

The best preventive of these dangerous visitations, is quietude of mind and body after delivery.

The morbid affection in question may occur independently of the perpetual state, particularly after great uterine discharges, protracted lactation, &c. and where a deranged state of the stomach and bowels, with intestinal irritation, obtain.

"When this affection arises from a disordered or loaded state of the stomach or bowels, purgatives, followed or accompanied by opiates, and enemata, are the remedies on which most reliance is to be placed.

"In the other cases, the tinctura opii, the sp. ammoniæ aromat. ; wine ; stimulating liniments ; proper fluid nourishment, cautiously given with wine ; bathing the face with cold water ; the effervescent medicine ; fanning, and a free air, are the principal remedies." lxxiii.

The great body of the work (62 pages) consists of a detail of cases, illustrative of the foregoing observations. Some of these we shall shorten or extract, to make this article more complete.

"Case I. A woman, whose labour was lingering, was bled to eighteen ounces, which expedited the delivery. She continued well till next morning, when she was seized with repeated shiverings,

succeeded by pyrexia and gastric irritability. An enema and purgative medicine brought away much hardened fæces, and a fluid resembling yolk of egg, with great relief. In the evening, however, there was heat, restlessness, jactitation, slight delirium, headach, confused vision, and faintness on attempting to sit up. *Effervescing mixture with salts*.—Third morning. The sickness returned with much uterine discharge. The opening medicine had acted. Thirty-five drops of tinctura opii in a draught. At eight o'clock in the morning, Dr. H. saw the patient, when she had nearly the same symptoms as described above. Thirty-five drops of tinctura opii, with a dram of the sp. ammon. aromat. administered. Cold zinc lotion to the pubis and vagina.—*Evening*. Had had some refreshing sleep; all the symptoms were abated; the bowels had acted, and the uterine discharge was lessened. She was ordered to take ten drops of the tincture of opium, and half a dram of the sp. ammon. aromat. every five hours; the effervescing medicine to be continued. After some slight affections of the chest and limbs, which were removed by anodynes, the patient recovered."

The following case will be found interesting in many points of view.

Case 2. Mrs. C. aged 21, was confined on a Saturday, in June, 1819, of her first child. Much scybalous fæces were passed during labour, and on the succeeding day, from ʒjss of ol. ricini. No more motions till Thursday, when she became affected with feverish heat, noise in the head, vertigo; the countenance was flushed; pulse 120, with beating of the carotids; flashings of light before the eyes; respiration rather quick; lochia and milk abated; tongue loaded. No pain. Fourteen ounces of blood from the arm induced deliquium. She felt relieved, and the pulse fell. A cold lotion was applied to the forehead, a blister to the neck, and a powerful purgative given.

About seven hours afterward the pulse got up to 120, with noise in the head; the pupils continuing natural. Twelve ounces of blood abstracted while in the erect posture, which produced fainting. Five grains of calomel were given, and an enema with an ounce of ol. terebinthinæ. Copious dark and very offensive motions were passed in the night. At seven o'clock on Friday morning, the pulse was down to 100; the head relieved; the skin cool; the tongue white and moist. The opening medicine was continued.

On Saturday, there being some headach, with slight flushing of the cheeks, eight ounces of blood were taken away, which, like the preceding, exhibited a buffy coat. Leeches and a blister were ordered; and four grains of calomel and pulv. antim. were given every four hours.

On Sunday morning the practitioner found her with violent



beating in the head ; pulse 120 ; the skin very hot ; a great expression of lowness in the countenance ; lochia and milk stopped. A tea-cupful of blood taken produced faintness, and abated the beating in the head. Six drops of the black drop given. About noon she was flushed, and the beating had increased. Six ounces of blood were drawn from the nape of the neck by cupping. The calomel and antimony continued. Prussic acid prescribed.—*Monday*, the pulse stronger, but 130 ; sinapisms to the feet.—*Tuesday*, her head felt heavy like a brick, and she felt as though she were dying. A dose of rhubarb with sal. polychrest, followed by seven drops of the black drop. Refreshing sleep resulted. An enema exhibited, on awakening, brought away several foetid evacuations. In the evening, felt better, another opiate administered.—On *Wednesday*, she had had several hours refreshing sleep, awoke in a profuse perspiration, and said she was quite well. Alternate doses of opiate and aperient medicines were continued for some time, and the patient recovered.

Our limits will not permit us to notice any more of the cases terminating favourably, of which there are eighteen detailed.

The following case is introduced by Dr. Hall, under the head of "fatal effects of blood-letting." We shall give it entire.

"Mrs. V. of pale and sallow complexion and weakly constitution. Six days before her confinement of her first child, she was awoke in the night by severe pain of the head confined to one spot. This pain continued several hours, when Mrs. V. applied to her medical man ; she was completely relieved by losing sixteen ounces of blood, followed by purgative medicine, and she continued well.

"Mrs. V.'s labour occurred on September the 1st, 1817, and was rather tedious, but natural, and she had no complaint until the second day, when she experienced a second attack of pain in the head, but less violent than the previous one. She was seen six hours after this attack ; she then complained of pain and beating of the head, about the anterior part of the right parietal bone : the skin was hot, and the pulse frequent and strong. Sixteen ounces of blood were taken from the arm, leeches ordered to be applied to the temples, and an enema and purgative medicine were prescribed.

"In three hours time, Mrs. V. was again visited, and it was deemed necessary to abstract more blood. Six or eight ounces were therefore taken ; faintishness was induced, and the symptoms were little abated.

"On the succeeding morning, September the 4th, the symptoms still remained the same ; the surface was hot ; the bowels had been purged, and the evacuations were natural. The saline mixture was ordered. At noon the symptoms remaining as before, the purgative medicine was repeated and a blister was applied. In the even-

ing, the evacuation of the bowels was satisfactory; the pain of the head was not severe, but there were much beating and a rushing noise; there was restlessness; and a teasing, irritative cough. A draught with thirty drops of the tinctura opii was administered.

"The next morning, September the 5th, Mrs. V. expressed herself as being much better from having enjoyed comfortable sleep. The surface was still hot, and the head still affected as before.—In the evening, there was a degree of tenderness in the region of the uterus; she dreaded the idea of being bled, from the faintishness she had before experienced from it, and said it would certainly kill her.

"On the morning of the 6th, the pain in the region of the uterus was relieved, the head was affected as before, the window was kept open for want of air. In the evening, Mrs. V. complained of being fainty and low. A mixture with camphor and sulphuric æther was prescribed.

"On the 7th, the irritative cough again occurred; the pulse was frequent, from 120 to 130; and the other symptoms remained unabated. A physician was consulted. Sixteen ounces of blood were directed to be taken from the arm; a grain of calomel was given every three hours, and the effervescing medicine was ordered.

"On the morning of the 8th, Mrs. V. appeared to be relieved in every respect; the heat of surface and the pain of the head were diminished; the blood presented the buffy coat. It was thought proper to abstract more blood, as the last bleeding had apparently conferred benefit, and had been borne better than the preceding ones. Four tea-cupfulls of blood were taken; the most dreadful fainting followed, with gasping, open mouth, a convulsive action of the diaphragm—and in an hour or two death closed the scene." p. 51.

We grant that in the foregoing case, the *last* venesection was exceedingly ill-judged, and we much wonder how any physician, of common observation and reasoning powers, could have persisted in such ultra-depletory measures, seeing that the symptoms were all relieved by the previous depletion, which previous depletion, we consider to have been not only justifiable, but indispensably necessary. It is hardly fair then to class this case under the head of "fatal effects of blood-letting," since death was owing to an injudicious *perseverance* in the measure, rather than to any impropriety in the principle itself; for we believe, that the patient would have died, had she not been bled at all. Indeed, we have frequent occasion to deplore the ultra-depletory mania which has seized some weak brains of the present day, and much fear it will bring a character of rashness and danger on a most important remedy, when judiciously managed. This has already been the case with mercury; and, therefore, we con-

sider it our duty to repress, as far as in our power, all extremes, whichsoever way they bend.

We shall conclude our extracts with the following case, illustrative of the affection under consideration, as occurring independently of the puerperal state.

"Mrs. Y. aged 26 had been alarmingly indisposed during fourteen days, when my attendance was requested. Straw had been spread over the pavement, and the candles were screened; she had awoken from her sleeps in great alarm, with palpitation and fainting; and, on a subsequent occasion, the windows and doors were requested to be thrown open, and the smelling bottle was used.

"Mrs. Y. was indisposed six weeks previously to the present attack. It was thought right to take away some blood. Mrs. Y. did not completely recover, but lost her good looks and continued to feel poorly. The complexion had become pallid; the bowels were constipated and disordered; the catamenia had long been profuse.

"Mrs. Y. became indisposed when at a distance from home. At 11 o'clock at night, she was seized with severe suffering, begged the window might be opened, and was relieved by taking a little brandy and water. On the ensuing day, Mrs. Y. was low and ill, but free from palpitation or fainting. During the next three days, Mrs. Y. continued better, and on the last, performed a journey home without any bad effect.

"About 11 o'clock at night, a few days after her return, another attack was experienced, attended by palpitation, fainting, and coldness. A little brandy and water again afforded some relief.

"On the next day, eight ounces of blood were taken from the arm. Mrs. Y. continued low and ill, but free from any attack of the kind formerly experienced. On the next day the same report was made.

"At seven in the evening of the succeeding day, there was another attack, and a more formidable one at eight. On the next day there was pain of the head; and on the next, early in the morning, there was an attack of urgent suffering, feeling of dissolution, sense of heat about the head and stomach; this was relieved, but Mrs. Y. continued weak and low. A similar paroxysm took place the ensuing day, and again on the next, leaving her exhausted, restless, and wakeful. The surface was affected, with great perspiration and sensibility to the cold.

"On the succeeding day, there were frequent attacks of palpitation and fainting, especially on falling asleep.

"The following were the principal symptoms observed in this case: great susceptibility to fatigue, noise, or disturbance; sense of heat about the head and vertigo; wakefulness; palpitation and faintishness, especially on falling asleep and on awaking; great oppression in the breathing, with eructation; painful spasms, and sense of numbness or torpor of the limbs. These symptoms recurred in alarming paroxysms, and from the slightest causes.

"This affection yielded in the most favourable manner, almost without any reverse, to a cautious conjunction of aperients, opiates, the *sp. ammoniæ aromat.* and the *tinctura camphoræ comp.* and nourishment frequently given in small quantity—every source of exertion, of hurry, of thinking, or of feeling, being vigilantly avoided." p. 57.

We have now exhibited, we hope, such an analysis of the little work before us, as will enable the reader to judge for himself respecting its merits. We have very little comment to make ourselves. We think the profession is under great obligations to Dr. Hall, for drawing their attention to those puerperal affections where irritation borders on, or even assumes the character of inflammation, and where strong depletory measures should be cautiously put in force. The only drawback on the utility of the publication, is the danger of its embarrassing the inexperienced practitioner, where actual inflammation obtains, combined with, or under the guise of irritation. At all events, we trust that the work will tend to effect the object designed by the author, that of exciting the minutest attention to the *discrimination* of diseases.

III.

Letters to the President of the Associated Apothecaries and Surgeon-Apothecaries of England and Wales, on the present State of the Practice of Physic and Surgery. FIRST SERIES. ANONYMOUS. London, 1820, pp. 77.

THE endeavour to increase the respectability of a class of men who are of such essential service to the community at large, as the general practitioners, by a fair statement of their claims to public confidence, merits not only the gratitude of the profession, but of the public in general. Such is the principal object of the very intelligent, although anonymous author of these letters, which are "intended to give a comparative view of particular systems of medical education; to consider the separation of medicine from surgery; to estimate the claims of the general practitioner; and to propose a more respectable mode of remunerating his attendance."

It is very truly stated, that whatever benefit the apothecaries' act has conferred upon the public and the general practitioner, *as a body*, it is inadequate to support individual claim.

"It does not support the interest of the competent practitioner, in the ratio of improvement, in the system of his professional education, which has been enforced by its regulations." "The expensive elementary and professional studies which are required of the candidate for general practice, are highly necessary; and when completed, should secure to him the fair chance of an adequate return."

We most cordially agree with the sentiments of the author contained in the following passage; a radical change in the mode of remunerating the professional attendance of the general practitioner, is most ardently to be desired.

"He *should not* be compelled to seek for payment out of the profits of a trade, wherein he is *obliged* to become a loathsome dealer, as the only method of establishing a charge."

In reference to the fee of the physician, the author observes,

"Whatever difference it may be thought advisable to make in the *amount* of recompense, for services which are essentially the same, although performed by persons of dissimilar pretensions, *the mode* of remuneration should unquestionably be founded on a common principle. The general practitioner, equally with the physician, is entitled to be paid for the exercise of his skill."

It should not be forgotten, that a very wide difference exists between the surgeon-apothecary of the present day, and the apothecary fifty years ago. The education of the former is, in most instances, liberal, although graduation at a university is seldom considered to form a necessary part of it. He enters upon his medical studies, with his mind sufficiently stored with the general principles of knowledge, to reap the well-merited harvest of assiduity; a competent knowledge of the various branches of his profession, by the skilful exertion of which, he afterward not only reflects credit upon his teachers, but is enabled to confer upon those entrusted to his care, the most valuable benefit that can possibly be derived from human agency;—a diminution of affliction in the trying hour of sickness.

"When the untutored apothecary was merely a pharmacopolist, or at most was *permitted* to prescribe for that numerous part of the community who could not afford to pay the physicians' fee, while he was deemed totally ineligible to undertake the professional charge of the affluent; when his gains arose exclusively from compounding prescriptions, and neither learning, nor genius, nor skill, were considered necessary qualifications in the medical attendant on the poor, then, indeed, the earnings of his trade were congenial with his pursuits; and in their character, if not always in the sum total of their amount, they would be commensurate with his feelings, and often more than equal to his just desert."

If the public have any compassion upon themselves, they

would cheerfully support the proposed alteration in the mode of remuneration, which would effectually prevent the present system of forcing down their throats a quantity of drugs, which are rarely, if ever necessary. Let it not be forgotten that the proposed reform in the manner of rewarding the services of the general practitioner does *not* contemplate an *increase* of remuneration; on the contrary, to use the words of our author—

“It is probable, that upon a reasonable scheme of recompense, he would receive, in general, a less sum total than heretofore, upon the old trading principle; but would it not be infinitely more gratifying to be paid a fair and moderate compensation in the character of a gentleman and man of science, than in a mode which every one concerned for the honour of medicine must reflect on with indignation.”

That every individual, to whose care the public health is to be confided, should undergo the ordeal of a suitable examination, is very properly insisted upon. The public have a right to require such a proof of the competency of the practitioner, and we sincerely wish we could add, that the examinations which are undergone, are sufficient to satisfy so reasonable a desire. In our opinion, the examinations at the College of Surgeons are much too superficial; they are certainly not commensurate with the highly important duties, the execution of which, the professor of a diploma is authorized to assume. Our author remarks, that “a security against ignorance is provided by the examinations which the student is compelled to undergo.” Immediately afterward, however, it is said, that “by these examinations his fitness *should* be accurately determined. The examinations *should* determine, by the strictest inquiry, the knowledge already attained. They should reject incompetency, and silence presumption. They give a passport to merit, and *should* guard the public against imposture.”

Now, from the stress laid upon the *should*, we infer that the author is of our opinion; that he is, in fact, very sceptical as to the efficiency of these examinations. In most other countries, the abilities of the candidate for permission to practise are scrutinized with much more severity than in our own;* the consequences which result from such examinations are obvious. The public confidence in the skill of their medical attendant is increased in a ratio proportionate to the strictness of the investigation through which he has passed; while the practitioner himself justly feels proud of those testimonies, which are not bestowed until sufficient proofs are given that they are deserved.

* Vide page 590, in our April number.

"That a weak and idle pupil does, occasionally, disgrace his school, requires no particular evidence from me; but that he should obtain the certificates of his learned teachers, in testimony either of his diligence or proficiency, demands explanation. That he should be approved by the Court of Examiners, creates both surprise and regret." 38.

The third Letter contains many remarks well worthy the attention of the diplomatized practitioner. We hope, that every man who has received into his house a youth, as an apprentice, may peruse the observations of our author upon the duties which devolve upon him, without experiencing any of those "compunctious visitings of nature," which will inevitably intrude upon his mind, if he stand self-convicted of not having honourably repaid the confidence reposed in him — of not having endeavoured "to qualify him for the pursuit of those ulterior objects of study, by the full attainment of which he shall be enabled to pass his examinations with credit, and to enter upon the practical duties of his profession with every prospect of benefit to the public." The receipt of a liberal premium, and "a full measure of service from the labour of his apprentice," we fear, are sometimes the primary, if not the only object, of the master. If, however, the master performs his duty, we contend, that the period of an apprenticeship is spent in a profitable manner; a thorough knowledge of pharmacy is obtained, without which no man can enter with confidence upon the practical duties of his profession, while the many hours which are unoccupied in the acquirement of pharmaceutical knowledge are, or ought to be, employed in the improvement of those branches of general study, which have previously occupied the attention of the pupil. That he is sometimes permitted to squander away his time without profit to himself, and disgracefully to him to whose charge he is committed, is very certain, and much do we lament the fact. The occasional *non-performance* of that which may justly be termed a moral duty on the part of the master, forms no argument, however, in contradiction to the advantages which will be derived from a *well-conducted* apprenticeship.

The fourth and last Letter considers the propriety of the division of the healing art into separate departments. The motto chosen by our author is sufficiently expressive of his opinion upon this subject, in which we perfectly concur.

"Omnes medicinæ partes ita connexæ sunt, ut ex toto separari non possint." CÆLSUS.

So long as there exist different grades in the same profes-

sion, the duties of the one closely intrenching upon, and, in fact, identifying it with the others, so long will petty jealousies occasionally arise, to the exclusion of those better feelings which alone ought to influence the conduct of the medical practitioner, by whatever name he may be designated. These Letters, however, are not the emanations of professional jealousy; they are unstained by the slightest colouring of illiberality, from which even the liberal professions are not always free. Although the object is to increase the respectability of the general practitioner, no attempt is made to derogate from the claims of the learned and ingenious physician; to him superiority is freely conceded. For our own parts, we disdain the Aristocratic feeling, that plumes itself upon the possession of a title abstractedly considered; and we perfectly coincide in the sentiments of a quotation the author has introduced.

"A physician of a candid and liberal spirit will feel no superiority but what arises from superior learning and superior abilities." "As a Doctor's degree (says the scientific Gregory)* can never confer sense, the title *alone* can never command respect; neither should the want of it deprive any man of the esteem and deference due to real merit."

The intention of this little pamphlet is deserving of much praise; the unaffected and perspicuous manner in which it is written, evinces the good sense and talent of the author. It will be read with interest by the profession at large, and particularly by the general practitioner, to whose attention it has more immediate claims.

IV.

Observations on Strictures of the Rectum, and other Affections which diminish the Capacity of that Intestine, including Spasmodic Constriction of the Anus, the Hemorrhoidal Tumours, Excrescences, and Prolapsus Ani: and the Mode of Treatment, accompanied with Cases and Engravings. By W. WHITE, Member of the Royal College of Surgeons, London, and one of the Surgeons to the City of Bath Infirmary and Dispensary. Third Edition improved. One vol. 8vo. pp. 172. 1820.

Those diseases affecting the channels by which excrementitious matters are carried off from the body, are scarcely less

* Dr. Gregory, of Edinburgh.

terrible in their consequences, though more slow in their progress, than the diseases incidental to organs of supply, and what are termed the vital viscera. Who would not prefer a chronic inflammation of the lungs to a similar disease in the bladder? Is not an ulcer in the rectum almost as much to be dreaded as an abscess in the liver? It is now well ascertained, that all the muscular and membranous tubes of the human body, as the œsophagus, stomach, small intestines, colon, rectum, ureter, and urethra, are liable to spasmodic and organic constrictions, which often render life miserable, and not seldom terminate our existence. Strictures of the rectum have not excited much attention till of late years. Dr. Sherwin, who is the first in this country, who gave a complete history of the symptoms attending contracted rectum arising from schirrhous, has the following melancholy prognosis.

“The disease comes on in the most gradual and imperceptible manner; slow in its progress, but terrible in its consequences; it yields not to medical assistance, but must, under the best management, become ultimately fatal.”

This prediction, Mr. White thinks, is true, as it respects the scirrhus-contracted rectum: but not so with regard to simple stricture. Simple stricture of the rectum, our author considers as of frequent occurrence, but not generally *within the reach of the finger*, as some eminent practitioners believe. A scirrhus state of the rectum, on the other hand, is commonly within reach of the finger.

Mr. White does not wonder at strictures of the rectum being frequently overlooked, since, like strictures of the urethra, they are capable of exciting morbid action in distant parts of the system. The symptoms of their early stages too, are apt to be confounded with “habitual costiveness, piles, stomach complaints, or bilious obstructions;” while those attendant on the more advanced progress of the malady, are attributed to chronic diarrhœa.

“What Dr. Sherwin has so justly observed with regard to scirrhus of the rectum, is likewise strictly applicable to simple stricture. ‘There is no disease (he says) to which the human frame is incident, that is more liable to be misunderstood. Diarrhœa, dysentery, tenesmus, colic, painful distention of the abdomen, inflammation of the bowels, and iliac passion, which are each of them formidable, and often fatal in themselves, may be successive symptoms of the scirrhus rectum. Under some one of these appearances, it is highly presumable, that many patients have died without the real cause having ever been assigned or suspected; and even when it is suspected, and becomes an object of manual investiga-

tion, may be easily mistaken for an enlargement of the prostate gland or scirrhus uterus." 8.

Though no age is entirely exempt from this disease, yet it does not often appear before the meridian of life.

The most simple form, according to our author, of constriction in the lower part of the intestinal canal, is that produced by spasm, which is an inordinate degree of contraction in the muscular coat of the intestine, from some irritation. Numerous repetitions, or long continuance of this spasmodic, may produce permanent contraction.

"Whenever, therefore, a spasmodic constriction at the sphincter is discovered, it becomes highly expedient to ascertain the state of the passage above, by introducing a bougie not less than ten or eleven inches in length, and of a diameter adapted to the degree of constriction at the sphincter; for if an obstruction should remain higher up the passage unexplored, any attempt to remove the constriction below will prove of little avail." 12.

Mr. White observes, that sometimes, when a stricture is within reach of the finger, it feels like a membranous ring, and where there is much pressure from an accumulation of *feces* above, a regular contraction and dilatation of the muscular coat of the intestine may be felt. Although this stricture be permanent, yet our author thinks it may be properly termed spasmodic, as it is not attended by any sensible thickening or induration of the intestinal coats, but merely a contraction of their muscular fibres. In such cases, the gut above is very apt to become distended into a pouch, in consequence of reiterated accumulations; and this may lead a surgeon to suspect that he feels a tumour in the rectum, upon the first examination.

The next form of contraction which our author describes, is what he terms simple permanent stricture, which, he thinks, occurs more frequently than the spasmodic, and differs from the latter, in being attended with some slight alteration in the structure of the part where the stricture takes place, consisting of a thickening of the coats of the intestine, not by any means considerable, and in general, only occupying a very small portion of the circumference of the gut.

"On passing the bougie slowly through the stricture, the muscular action may be distinctly discerned, which is not the case when the rectum is become thickened and indurated to any great extent, as commonly happens in a scirrhus state of the intestine." 17.

The cause of this coarctation, Mr. White thinks, with reason, to be a contraction and gradual thickening of the muscular coat of the gut, the inner membrane, though sometimes giving origin to a number of little processes that form

a circle round the intestine, appearing incapable of contraction of itself. This simple stricture of the rectum is sometimes attended with prolapsus ani, fleshy excrescences, and hæmorrhoidal tubercles.

“Not unfrequently, a contracted state of the rectum occurs as a consequence of the venereal disease. When the disorder proceeds from this cause, it generally commences with an appearance either of ulceration, or excrescence about the verge of the anus. The sphincter ani becomes gradually contracted, and the disease extending upwards within the rectum, a considerable thickening and induration of the coats of the intestine take place, which produce great irregularity and contraction in the passage. Sometimes there is a continued line of contraction from the anus, as far as the finger can reach, then terminating in a kind of cartilaginous border, the inner membrane having a thickened and condensed feel. There is often a discharge indicating a diseased, if not ulcerated state of the inner membrane above the contracted portion of intestine. All the cases which I have hitherto met with of this nature, have occurred in females, and they have uniformly proved incurable, when attended with the structural derangement just described.” 18.

The rectum is also liable to contraction from tubercles situated immediately above the sphincter ani, very different from the soft, bluish, hæmorrhoidal tubercles, which often surround the anus. These last protrude when the patient strains; and when returned within the sphincter, no hardness can be perceived in the gut. It is the reverse with the other tubercles; they do not come below the sphincter, and they have an indurated feel.

Another cause of contraction, and that the most deplorable of all, is scirrhus. Many instances of this kind are recorded by authors; and as it is generally incurable. Mr. White thinks that other cases of contraction may have been mistaken for true scirrhus, and, on that account, abandoned.

“It is proper to notice, as one distinguishing mark of true scirrhus, that it generally commences not at the lower extremity of the rectum, as in the last-mentioned instances of contraction, arising from a venereal cause, but (as Dr. Baillie observes) two or three inches above the outer sphincter, and there is a sound capacious portion of the bowel between the stricture and this sphincter.* The scirrhus commonly surrounds, and sometimes occupies nearly the whole cavity of the rectum, from the extensive thickening and induration of its coats, particularly the muscular; and in the advanced stage of the disease, there is either an abrasion or entire de-

* I do not mean to infer from this remark, that the disorder may not extend in its progress to the extremity of the gut.

struction of its internal membrane, attended by a serous, or thin sanious discharge. The severe sufferings of the patient during the progress of this dreadful malady, and its more rapid advance to a fatal termination, will also serve to distinguish it from other species of contraction, when it would be difficult sometimes to decide from mere local investigation.

"The following are the appearances discovered by dissection, which are so accurately described by Dr. Baillie, as to render any description of mine unnecessary. 'It (the scirrhus) sometimes extends over a considerable length of the gut, viz. several inches; but generally it is more circumscribed. The peritoneal, muscular, and internal coats are much thicker and harder than in a natural state. The muscular, too, is subdivided by membranous septa, and the internal coat is sometimes formed into hard irregular folds. It often happens, the surface of the inner membrane is ulcerated, producing cancer. Every vestige of the natural structure is occasionally lost, and the gut appears changed into a gristly substance.' " 20, 21.

It is necessary to recollect, also, that the rectum is liable to have its capacity lessened by other affections of the neighbouring parts, especially a scirrhus uterus—sometimes an enlargement of the ovary, or a diseased prostate.

Etiology. Although Mr. White does not deny that irritation or inflammation of the inner membrane of the gut may, in some instances, be the cause of stricture; yet he thinks, that such instances are very few, compared with those of simple permanent stricture, where no such cause can possibly be assigned. He is inclined to think, that—

"The most frequent predisposing cause, is the gut being somewhat narrower about the termination of the sigmoid flexure of the colon than it ought to be, for the purpose of allowing a free and easy passage to the fæces. I was led to this opinion in consequence of patients having so often stated to me, that so long as they could remember, they never had a natural motion, without experiencing more or less difficulty: it will then appear obvious, that if the passage should be preternaturally small, it must necessarily form an impediment to the free discharge of the fæces, and thus a foundation will be laid for a greater degree of contraction, as reiterated pressure from the accumulation of fæces must tend to induce a spasmodic action of the intestine, and this for a length of time repeated, may ultimately produce a more permanent state of contraction, increasing in proportion as the part becomes more deranged in its organization." 26, 27.

Mr. W. does not, by this, mean to exclude other contributory causes, as acrid substances taken into the stomach, a morbid state of the secretions, more especially the biliary, "which, by inducing an increased vascularity of the mucous membrane of the intestine, may prove an exciting cause of

stricture." Those derangements in the colon, described by Dr. Parry and others, Mr. W. thinks, are often owing to strictures near the termination of that intestine, or in the rectum.

Many instances similar to that quoted from Dr. Lettsom, at page 29 of Mr. White's work, may be found in the pathological writings of Bonetus, Morgagni, and Licutaud. We shall only take one case from the last of these three eminent authors, as a specimen.

"Quidam à triennio tympaniticus, ileo gravissimo corripitur : vomitus nimirum accedit stercorosus, cum singultu pertinacissimo. Brevi collabuntur vires ; et intra triduum rebus humanis vale supremum dixit.

"Inter exenterationem reperitur, septem pollices supra rectum firma et callosa coarctatio intestini coli ; veluti circumdatum filum id arcè constringeret. Stupenda erat dilatatio supra obicem, non solum coli, sed etiam aliorum intestinorum." CLAR. DE HAEN. *Læsiones Abdominis, Lib. Primus. Observat. 494.*

Symptomatology and Diagnosis. As was before observed, the approach of intestinal stricture is slow and insidious. The symptoms more particularly indicating its existence in the rectum are habitual costiveness, occasional uneasiness from a sense of fulness and flatulence in the course of the transverse arch, and especially of the sigmoid flexure of the colon, aggravated by certain kinds of food. This fulness may sometimes be felt externally, about the hollow of the left ilium. To this symptom are often added, acute pain in the course of the colon, with a sense of pressure when the fæces accumulate above the stricture ; violent spasmodic contractions in different parts of the intestine ; sense of tight girding round the body ; all which symptoms are aggravated in proportion as the stricture is seated high up in the gut.

Sooner or later an uneasiness and difficulty are experienced in passing the fæces, which become gradually more scanty, smaller-figured than those that are natural, and often discharged with a squirt, and flatulence. When the stricture is high up in the rectum, the fæces will sometimes lodge below it, and appear of a natural size when discharged. This may lead to an erroneous opinion.

Pain of the back, about the sacrum, is a very common attendant on stricture in the rectum, and sometimes a primary symptom ; the pain frequently shooting down the thighs, and in some instances to the soles of the feet. Hæmorrhage is also a frequent occurrence, as well as a mucous discharge. Mr. W. has found pain in the back part of the head a usual symptom of this disease.

In simple stricture, pain is only experienced on going to stool; in a scirrhus state of the rectum, the sufferings are not only greater at these times; but there is also, at other times, great pain about the sacrum, often shooting down the thighs, as well as a sense of burning heat and pain in the rectum. In this last deplorable disease, especially in its advanced stages, the fæces passed are generally in a liquid state, so that the disease may be confounded with a chronic dysenteric complaint. In strictures of the rectum, there is little emaciation or loss of strength until the disorder is far advanced; the countenance then becomes sallow; and, in some instances, the pulse is quick, with other hectic symptoms.

Mode of Examination. The first step to be taken, our author observes, (after the bowels have been freely opened) is to introduce the finger as high up the rectum as possible, desiring the patient to strain as at stool, by which means the stricture may sometimes be discovered. If a small bougie, however, be introduced, it is apt to hook upon a fold of intestine, and thus a stricture may be supposed to exist, when, in reality, there is none. If, therefore, on introducing the finger, neither stricture nor induration can be discovered (which Mr. White considers a favourable circumstance, as a scirrhus state of the rectum is generally within the reach of the finger) a large-sized bougie is to be introduced, and pushed up as high as the colon, which will be readily done, if there be no obstruction in the passage; "because there may be a stricture at that part of the gut only, although we often meet with one two or three inches lower."

The situation of strictures in the alimentary canal is most commonly, Mr. White observes, about the termination of the colon; probably because the gut is naturally more exposed to pressure at its curvature, and at the projection of the sacrum, and consequently to accumulations of fæcal matters above this part.

"Strictures (says Dr. Willan) take place in different situations; but they occur so frequently about the sigmoid flexure of the colon, near its termination in the rectum, that this part should be carefully examined in every case of total obstruction. The insertion of an unyielding tallow candle, though often practised, has been generally found painful and inefficacious. It is requisite for the purpose to employ a bougie thirteen inches long, and of a proportionate strength; which should also be directed with a nice hand, by a skilful surgeon."

Treatment. Analogy would lead us to suppose that mechanical obstructions in the rectum would be relieved by mechanical means, in the same way as strictures in the urethra or œsophagus. Nevertheless, mechanical dilatation is not always applicable in any of these cases; and it is the object of Mr. White, in this section of his work, to show where it is, and where it is not, to be employed in constrictions of the rectum.

Wiseman informs us, that in one case of intestinal stricture, he divided the part with an instrument successfully; in another, he used the actual cautery; but a subsequent pleurisy and dysentery proved fatal. Desault made use of a tent made of long lint, knotted and folded in the middle, dipped in cerate, and introduced into the rectum by means of a forked probe. This was removed twice a day.

Dr. Darwin suggests, that the gut of an animal should be introduced, and then blown up with air, which is very nearly on the same principle as Mr. Arnott's dilator. Mr. Charles Bell recommended, some years ago, a sponge tent properly prepared, with small doses of calomel, to be purged off once or twice a week. Mr. Robert White suggests the probability of mercury being useful in a contracted state of the rectum, from its being serviceable in the scirrho-contracted œsophagus; and Desault recommends the same treatment, particularly from his having frequently seen venereal symptoms connected with the diseased state of the rectum.

"Before we employ the means calculated to dilate the passage of the rectum, we should endeavour to ascertain not only the degree, but also the nature of the contraction, which is of great consequence; because it may happen that the diameter of the gut is less in a simple stricture than in a scirrhus state of the intestine; and yet, in the former instance, a dilatation of the passage may be effected, whilst in the latter case, a dilatation will not only be impracticable, but the introduction of a bougie under such a circumstance, may prove very injurious, by forming an additional source of irritation." 56.

After much experience and comparative trials, Mr. White finds that a tent, somewhat similar to Desault's, which, however, he designates by the term "bougie," is preferable to the bougie, as commonly made, "not only from its being attended with much less inconvenience to the patient, but from the supposition that, by a continued gentle pressure, especially in a tuberculated state of the intestine, absorption would be more likely to be effected, than from employing the common bougie, which, in general, can only be retained a short time in the rectum." 56.

“From employing the common bougie in a few instances (where the stricture was as high up as the termination of the colon) the irritation was so great on introducing it, that I was led to make the tent somewhat stiffer, (but considerably less hard than the bougie) so as to be able to pass it as high as might be required.” 57.

The bougie should be, at first, of such a size as to pass the stricture without considerable resistance, lest irritation and inflammation be excited. The size should also be increased very gradually till the parts become accustomed to the stimulus. There being always more or less of spasmodic action excited by the bougie, it should be introduced slowly and gently, waiting a little when it touches the stricture, before it is pushed through. At first it should not remain longer than half an hour in the rectum; if there be much irritation, not so long. By degrees it may be allowed to remain eight or ten hours at a time, with little or no inconvenience to the patient. In general, it may be passed daily. From four or five to eight or ten weeks will elapse before the stricture admits a full-sized bougie; even then the instrument must be gradually left off. Mr. White has observed the natural action of the bowels to be generally much improved by the application of the bougie.

As auxiliaries, we may mention the hip-bath, and injections with extract of poppy. The former may be used for a few minutes before employing the bougie; and the anodyne injection after the bougie contributes to lessen the morbid irritability of the part.

In respect to the division of intestinal stricture by the knife, as practised by Wiseman and others, Mr. White thinks there can be no doubt of the occasional necessity for such an operation, when the bougie fails. The species of contraction noticed as the consequence of venereal infection, Mr. W. has found exasperated by the bougie, even when conjoined with a regular course of mercury. “In the tuberculated state, however, arising from a similar cause, the bougie will be found of great service.” In scirrhus of the rectum the bougie would manifestly be improper; and it is on this account, Mr. White thinks, that some eminent men are averse to the employment of that instrument altogether in cases of contracted rectum.

In respect to the medical treatment, the first object is to regulate the bowels; laxative medicines being necessary, not only in the constipated state of the bowels, attendant on the early stage of the disease, but also in its more advanced progress, when a diarrhoea supervenes. Castor oil is to be preferred to any other medicine. Aloetic purges should be care-

fully avoided. Laxative clysters should be daily thrown up, if possible; for, by dissolving the fæces, their passage through the contracted part is greatly facilitated. Great attention, however, should be paid in throwing up clysters. They should be made of water gruel, with a table spoonful of castor oil, or sweet oil, or a little Castile soap dissolved in warm water. Sometimes warm water alone will be sufficient.

“When injections cannot be thrown up in the ordinary way, from the contracted state of the passage, a large hollow bougie may be fastened (instead of a common pipe) to a bladder, by which means they may be conveyed beyond the obstruction.”

“I have prescribed mercury in some cases of scirrhus, and likewise in those of simple stricture; but I do not think it has ever been of any service in those cases of genuine scirrhus in which I have employed it. In simple stricture I am inclined to think more favourably of it. I have generally given the pil. hydrarg. combined with extr. conii. The latter, I think, tends to lessen the morbid irritability of the canal, whilst the former promotes a more regular discharge of bile. When the disorder is suspected to arise from a venereal cause, the exhibition of mercury is indispensably necessary.” p. 69.

In the advanced stage of scirrhus the sufferings of the patient are frequently so great as to render large and repeated doses of opium necessary. Extract of poppy and hyoscyamus are preferable, if they give sufficient ease, as they do not constipate. Would not the extract of stramonium or the lactucarium be useful in such cases? The local application of opium has not been productive of much effect in the hands of our author. The diet should consist of that kind of food which contains the greatest quantity of nourishment in the smallest compass. Jellies, sago, arrow-root with milk, beef-tea, thin chocolate, fresh fish, eggs, either raw or lightly boiled, will be proper; with a sparing use of animal food. Fermented or vinous liquors are, of course, to be abstained from. Mr. J. M. Good, when he wrote his Nosology, had three patients under his care, who were *alleviated* by light liquid and aperient diet, without surgical assistance.

We may here take an opportunity of mentioning an instrument, called a *rectum syringe*, which we have found very useful in affections of the rectum and adjoining parts. It is sold at Evans & Co.'s, 11 Old Change, and probably other instrument-makers in London. By means of this, suppositories are conveniently applied, and often answer a better purpose than injections.*

* During the last stage of carcinomatous stricture, when the stomach will no longer retain food or medicine, and injections have no effect, or cannot
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In the course of the work, our author alludes to an Essay, containing an ingenious mode of introducing the rectum-bougie, communicated to him by Mr. J. M. Coley, of Bridgnorth, and read, about two years ago, at the Medico-Chirurgical Society. Mr. Coley was first induced to try this expedient in a case of stricture, which occurred in a gentleman, aged 73. All attempts to pass a bougie were found impracticable, in consequence of the oblique course of the stricture, the projection of the upper part of the sacrum, and a thickening of the intestine towards the bladder, of such extent, as to occasion most distressing strangury and hæmaturia. It was found impossible to introduce even a hollow tube, for the purpose of injecting an enema. Medicine was unavailing, and the most pressing danger was at hand. Dr. Du Gard, of Shrewsbury, was now consulted, who, being satisfied that it was impossible to convey a bougie into the stricture, advised a sponge-tent to be tried. This was also found to be of no avail. In short, all the ordinary resources of our art were attempted in vain, and the patient must certainly have perished, had it not occurred to Mr. Coley that the bougie might be defended from all intervening obstructions, by means of a tin canula, and thus prevented from bending upon itself; a circumstance which had hitherto foiled his endeavours. On trying this plan with a small canula, he readily introduced through the contracted part, such a bougie as would just enter an adult urethra; and by repeating the operation daily, and increasing the size of the bougie, he dilated the bowel in the course of two months, as far as was requisite. By these means, and the administration of *pilula hydrargyri* and aperients, the patient's health was restored, and his usual bulk regained. His stools became large, and the action of the intestines regular. The tenesmus and copious discharge of mucus, together with the distressing symptoms noticed above, and that sudden jerk during the evacuation of the *fæces*, which is characteristic of stricture, subsided. He had an enlargement of the prostate gland, particularly of the right lateral lobe. The middle lobe did not appear to be diseased. The obstruction in the rectum had been observed about two years, and during the last forty years, he had been subject to frequent attacks of psoriasis and phlegmonous erysipelas. He had a small polypous tumour below the stricture, and an ex-

be had recourse to, we have found that the constipation may be removed occasionally, and existence protracted, by effecting the absorption of tincture of jalap, applied by means of friction on the abdominal parietes.

ternal hæmorrhoid ; neither of which produced inconvenience. During the cure, he retained the bougies eighteen hours daily, and walked about and rode on horseback, without displacing them. After a while, finding his strength and activity increase, and suffering some inconvenience from riding, he had the bougies introduced at four in the afternoon, and retained them until ten on the following morning, at which time he had regularly an intestinal evacuation. By this arrangement, his exercise and amusements had no interruption.—The bougies were gradually discontinued. He had two relapses at the distance of about six months each time ; but during the last year and a half he has been free from the disease. Through the whole cure, it was found impossible to make a bougie pass into the stricture, without the assistance of the canula. When the diameter of the canula was increased, to admit a larger bougie, Mr. Coley found that, by holding a lighted candle at the lower end, the orifice of the contracted part of the intestine could be readily distinguished. This we conceive must be a desirable object, inasmuch as it will assist us in ascertaining, in a situation *too distant for the finger to reach*, the appearance and nature of the disease under examination. The bougies he makes use of are similar to Mr. White's, excepting that they have a loop at the lower end, about three inches long, for the purpose of being secured to a T bandage. They are composed of lint rolled up, tied at the lower end with string, which forms the loop, and immersed in a composition of lead four parts, and wax one part ; and, lastly, they are drawn through a wooden frame, having holes of various diameters. Great advantage, he observes, will be derived from making the points conical. His manner of applying them differs from our author's in this, that they are *wholly concealed within the rectum*, as will be presently described ; which he considers a great improvement, as it enables the patient to walk about, or even ride on horseback, during the use of them. He advises them to remain in the bowel, if possible, all night ; which, he thinks, has the effect of promoting the absorption of diseased structure, by long-continued pressure, as well as of resisting the tendency to contract. At the same time, he observes, that the discharge of the cerate, produced by the heat and moisture of the anus, is avoided ; the cerate *not being melted by any portion of the intestine above the sphincter*.

As we consider this an important improvement in the treatment of this terrible disease, we feel disposed to afford it every possible publicity, and to recommend its adoption, when the bougie cannot otherwise be conveniently introduced, in

every instance of simple permanent contraction in the ordinary situation; namely, from four to five inches, or higher up the bowel. No case should be abandoned until all rational means have been attempted; and should this measure possess no other advantages than that of enabling those to use it who might not have acquired the *tactus eruditus* of Mr. White, and that of exposing to view the orifice of the stricture and the state of the mucous membrane, it would, on these accounts, in our opinion, be deserving of record; and this, we believe, is the opinion of one of the first hospital surgeons in this metropolis.

The canulæ Mr. Coley employs are of three different sizes. They are cylinders, six inches long, turned down at each end, and below the upper extremity, perforated with holes in a row, within one-sixth of an inch from the margin. A small piece of wash-leather is to be bound round the edge through these holes, for the purpose of defending the inner coat of the intestine during its introduction. A piston of wood, rounded at the top, extending half an inch beyond the canula, and sliding freely within it, with a handle and stop at the bottom, should be had in readiness. The diameter of the smallest canula must be half an inch; of the next size, seven-eighths of an inch; and the largest, one inch and one-eighth. The pistons should be adapted to the different canula. The most favourable position for the patient is the same as for most other operations about the anus; the body should be bent forward, while the head and hands rest on the seat of a chair. The piston being placed with its corresponding canula, and the outside of them both being covered with butter, or fresh lard, they are to be gently introduced within the anus, the sphincter of which must also be anointed. The piston being withdrawn, the canula is to be pushed upwards, until it arrives at the stricture, which will be known by the resistance experienced. The patient should be desired to make one gentle effort, as though he were about to evacuate the intestine; during which act, the upper end of the canula may be readily adapted to the orifice. Should any difficulty happen in endeavouring to procure a view of the strictured part, the upper end of the canula must be gently moved in various directions; and, after the proper course has once been ascertained, future trouble may be avoided by adhering to the same position in the subsequent operations. By the pressure of the canula against the stricture, its lips are expanded, and the rugæ of the mucous membrane removed. The bougie should now be conveyed through the canula into the orifice of the stricture, when its progress will generally be suspended by a sudden spasm, which is involuntary, and

imperceptible to the patient. During the continuance of this irritable state, no attempt must be made to carry forward the bougie. Having waited a few minutes, it may be pushed onward in a gentle manner; while the lower end of the canula is raised towards the apex of the os coccygis, and inclined to either side, according to the course of the stricture. By this combination of power so applied, as to make the long axis of the bougie approach towards a line with that of the stricture, all mechanical obstruction will be removed. The bougie should be kept steadily in its situation, and watching an opportunity, while the muscular fibres are relaxed and off their guard, it must be conveyed gently and steadily through the stricture. The length of the bougie need not exceed eight inches, which, being deposited in the situation that will presently be explained, will be equal in effect to one of ten inches employed in the usual manner; since it will be found to extend as far within the sigmoid flexure of the colon, as can ever be thought safe or desirable. When it has fairly passed beyond the obstruction, it should be propelled further, until its lower end has entered the canula to the distance of three or four inches, which may be effected by the assistance of the piston. While it is retained at this elevation by the piston, the canula must be drawn down to the stop, when the bougie will escape from the apparatus and lie across the pelvis, resting its lower end against the os coccygis or the levator ani, between that part and the tuberosity of the ischium. Lastly, the canula and piston are to be withdrawn.

Stricture is not so frequently met with in the sphincter ani as in situations higher up the alimentary canal. It has been accurately described, in a case published by Dr. Baillie, in the *Medical Transactions*, and noticed by our author, for the first time, in the present edition. We have sometimes found it accompanied with painful and troublesome ulcerations in the mucous membrane, occasioned by the passage of hardened feces. The ulcers are mostly longitudinal, have a sloughy appearance, and are healed with difficulty. The best application is the nitrate of silver pointed like a pencil, or powdered, and laid on the bottom of the ulcerated surface. In one instance, the disposition to contract and ulcerate was entirely destroyed by a fistula, which rendered it necessary for us to divide the sphincter.

Before we quit this article, we cannot avoid expressing our astonishment, that an account of the plan of treatment laid down by our author is nowhere, we believe, to be found in that useful work, Mr. Cooper's *Surgical Dictionary*. We hope this omission will be rectified in another edition.

We have now laid before our readers a comprehensive view of the improvements that have been published in the treatment of the dreadful malady under consideration, and have condensed into one focus, we trust, much useful information; together with a pretty full analysis of the volume before us, more than half of which is occupied with a detail of valuable and interesting cases and dissections, which it is not possible for us to contract within any reasonable compass. When we reflect that the disease had almost entirely escaped the notice of the ancients, and that the learned professors of our own times used to be content with recommending liquid diet and pumps and syringes, with a view of relieving what they could not cure, we cannot withhold our praise from those who have so diligently pursued the subject, and discovered that contractions in the rectum may be successfully treated, even when situated at a much greater distance from the anus, than was formerly known to be within the reach of chirurgical aid.

"Homines nullâ re propius ad Deos accedunt, quàm hominibus salutem dando." CICERO.

Three editions of the work under review are sufficient proofs of public approbation, and we can only add our humble mite to the general suffrage. The economical and unostentatious manner in which the work is printed reflects credit on the author, and is deserving of imitation in times of universal distress like these. Medical authors would find their account in attending to this point.

V.

Practical Observations on the Symptoms, Discrimination, and Treatment, of some of the most common diseases of the Lower Intestines, and Anus; particularly including those Affections produced by Stricture, Ulceration, and Tumour, within the Cavity of the Rectum; and Piles, Fistulæ, and Excrescences, formed at its External Opening. Illustrated by Cases. To which are added, some Suggestions upon a new and successful Mode of Correcting Habitual Confinement in the Bowels, to ensure their regular Action without the Aid of Purgatives; on a Principle essentially conducive to the Prevention of the above Diseases. By JOHN HOWSHIP, Member of the Royal College of Surgeons, in London. 1 vol. Octavo, pp. 176. London, 1820.

THE number of books which have lately issued from the press, on diseases of the pelvic viscera and lower intestines.

would almost induce us to believe that the late epidemic had, to use the expression of Sydenham, "turned in upon the guts," in order to give the *surgeons* a share of the practice resulting from its wide-spreading influence. The establishment of dispensaries is a measure that must tend to give an amazing impulse to the progress of medical and surgical science. In these institutions diseases are seen *earlier* among the poor than they otherwise would; and as the medical officers, in general, are young, zealous, and not distracted by the multifarious exertions of extensive private practice, they study the phenomena of diseases more carefully, record them more accurately, and communicate them more freely, than before these eleemosynary mansions were erected. These advantages are certainly not without some alloy, as it respects medical *literature*. The just balance between facts and deductions; that is, between cases and principles, is somewhat deranged, and the press pours forth the *former* in such a torrent as threatens a deluge rather than a fertilizing irrigation. Nevertheless, as individual cases form the basis of medical science, in the same manner as grains of sand form the mountain, and drops of water the ocean, we must not object to this multiplication, in this infantile period of our knowledge.

Mr. Howship is favourably known to the profession by several preceding productions, both of his pen and pencil; and the opportunities for observation which he enjoys in public and private practice, together with his access to the valuable museum and manuscripts of his patron, Mr. Heavyside, afford him ample materials whereon to exercise the talent with which he is entrusted.

The first chapter of the work before us is on Stricture of the Rectum; but as Mr. Howship's observations do not differ essentially from what is stated by other writers, we shall pass over this chapter, with the exception of some remarks on tobacco injection, which will be found in our first article, on peritonitis.

The second chapter is on ulceration of the internal surface of the intestines. Although observation has proved that inflammation generally precedes ulceration in all structures of the body, yet our author does not think that this is *alwys* the case. He has detected absorption in the bones, unconnected with any character of preceding inflammation.

"In the dissection of those who have died from disease in the alimentary canal, I have, in various instances, (says Mr. H.) found so little trace of inflammatory action around spots of apparently recent ulceration, that I cannot help believing that, under some

circumstances, irritation arising in the bowels, may establish a degree of excitement sufficient to induce ulceration, without any distinct sign of inflammatory action." 48.

We confess ourselves to be sceptical on this point. The appearances, *post mortem*, round an ulcerated spot, are not to be depended upon, especially in the mucous membranes, where all traces of prior inflammation may, and do often disappear after death, particularly where there is ulceration. And in a practical point of view, the inflammatory doctrine is the safest to bear in mind.

"In considering the occasional causes of irritation in the bowels, it has often appeared to me that the functions of the liver, and consequently the properties of the bile, are very much influenced by external circumstances; and that those who are but little exposed to the inclemency of weather, are nevertheless liable to suffer from an acrimony in the bilious secretion, as a consequence of common cold, an effect quite distinct from the increased quantity of thin mucous fluid excreted from the bowels in dysenteric diarrhoea; the first exciting a distressing sense of heat, and even excoriation about the anus; the second passing off without any such irritation, although they are both occasionally attended with an irksome sense of weight and bearing down in the rectum." 48.

Ulceration, in its commencement, is generally attended with pain in some part of the abdominal region, usually acute, and more or less intense, according as it is of a phlegmonous or erysipelatous nature.

"Obstinate costiveness, extreme tenderness, or severe pain in the belly, heat of skin, thirst, and white tongue, hard and quick pulse, will sometimes lead to a suspicion of acute inflammation, requiring diligent attention, and the most active treatment; while, in other cases, with heat of skin, thirst, foul tongue, and local pain, the pulse, although quickened, will not be remarkably hard." 49.

When ulceration follows as a consequence of the above, it will be either circumscribed or diffused. The former is the most dangerous, as the ulcer is more likely to penetrate through all the coats of the intestine, and thus prove mortal.

"In some cases, inflammation affects all the coats of the bowel at the same time, a circumstance that frequently is the means of saving the life of the patient. Coagulable lymph is poured out upon the bowel, producing adhesion either to the external parietes of the abdomen, or to some other part of the intestinal tube, by which assistance the ulcerative action making its way through the mass of lymph, produces an outlet for the contained matters through the external integuments, or effects a passage out of one into another part of the intestinal canal; in either case, preventing the mischief that would arise from the contents of the bowels escaping into the

general cavity of the belly. Sometimes the adhesive process puts an entire stop to the further progress of mischief." 51.

Superficial ulcerations, our author thinks, may heal, and all their febrile accompaniments vanish. Mr. H. has, in several instances, visited persons attacked with severe pains in the bowels, attended with discharges of blood downwards and upwards. The attacks were continued some time, the fluids passed resembling thick, dark, bilious stools; at others, appearing like dark grumous blood. In these complaints, the fits of griping pain have occurred after the manner of spasm, being presently succeeded by a free evacuation, from which the patient has experienced temporary relief. In one case, which terminated fatally, Mr. Howship had an opportunity of examining the body.

"The bleeding had taken place from the capillary or exhalant arteries upon the internal surface of the great intestine, and although it was evident that every part of the bowel had been a bleeding surface, no part had suffered ulceration, nor was any portion inflamed, though the whole was very red." 54.

Mr. H. attributes this complaint to a scorbutic diathesis, although there was no attendant spongy state of the gums. It is *not*, indeed, easy to account for those sudden and local injections of the capillary vessels of certain tissues, but we see them in the membranes of the brain, in the vessels of the lungs, and of other parts; and they have been not inaptly termed *apoplexies* by the French pathologists.

In respect to the treatment of inflammation of the bowels, we shall only select the following passage, which will be found to bear on the discussion which we entered into respecting purgatives in Enteritis, in our leading article.

"A very essential, if not the most important point, consists in establishing a free and relaxed state of the bowels. Till this point is achieved, the patient cannot be considered safe: but this once effected, and febrile action somewhat relieved, the case will, or at least ought, to end well, with the assistance of proper saline or antimonial diaphoretics, and due attention to diet." 59.

When ulceration has actually taken place in the mucous membrane of the bowels, the greatest attention will be necessary in respect to diet, in order to prevent the formation of acrimonious secretions in the canal. Mild diaphoretics, light tonics, aromatics, opiates, and castor oil, are the principal medicines to be used.

The 3d, 4th, 5th, 6th, and 7th chapters of the work, on Tumours of the Rectum, Prolapsus Ani, Hæmorrhoids, Fistula in Ano, and Hæmorrhoidal Excrescences, we must pass over, partly because they are not adapted for analysis, and

partly because the subjects are already treated of in other parts of this Journal.

The eighth, or last chapter in the work, treats of the means best calculated to establish a regular state and action of the bowels: and here there is certainly some novelty. The circumstance that led Mr. Howship to adopt a new plan of treatment in habitual constipation of the bowels, was as follows:

"It happened that an elderly lady, residing at Scarborough, desired my opinion, requesting me to consider of some plan, by the adoption of which she might obtain a more regular action of her bowels. She had no complaint to make as to her general health; her appetite was good, and she slept well; neither did there appear to be any material defect in the condition of the digestive organs; the only objectionable circumstance being that of her scarcely ever passing a stool without the assistance of medicine. The advice, she said, she had always received from her professional friends was, that, when confined in her bowels, she must still have recourse to opening medicines; she added, that really she had taken so great a variety, and so large a quantity, that she loathed the very idea of going on, and felt extremely anxious to know if any plan could be suggested to render it unnecessary.

"On reflection, it appeared probable, that this was an instance of deficient action from defective strength, and that, perhaps, by persevering for a time in the use of medicines calculated to restore tone, the bowels might recover the disposition, as well as the power, to propel their contents with regularity; at any rate, there could be no harm in making the experiment. I therefore first ordered the decoction and tincture of bark to be taken daily. This, in a week, appeared to have done neither good nor harm; there was no heat of tongue or skin; but there had been occasion for castor oil. Decoction of bark was next directed by itself; and in three weeks she thought her inside felt stronger, with less disposition to flatulence than before. In consequence of this amendment, the medicine was continued for a month longer; within which period, she found there was no longer any occasion to solicit the action of the bowels at all, a regular and easy motion occurring every day. This restoration in the tone and action of the bowels appeared likely to be lasting; for there had been no return of the complaint a year and a half afterward." 163.

The adoption of a similar principle, with some slight modifications, our author informs us, has, in a variety of instances, enabled him to restore to the bowels the power of acting from their own impulse, without the perpetual necessity of purgatives. In these cases, Mr. H. at first combined the decoction of bark, with a fourth part of infusion of senna, or such proportion as answered the purpose of regulating the bowels, occasionally diminishing the quantity of the aperient.

till the action of the bowels was observed to go on well with the bark alone.

We have no doubt that there are many cases in which the foregoing plan would be proper and efficacious ; but, from considerable experience in this class of complaints, we are disposed to think that it would not be found generally applicable. In the majority of cases of constipation of the bowels, the cause will appear to be a deficient secretion in the mucous membrane of the intestines, and of the glandular organs, whose excretory ducts open therein, particularly the liver ; and experience has proved, that the most effectual *methodus medendi* consists of such means as increase these secretions. This is the way in which purgatives themselves act ; but every stimulus gradually loses its power by exhausting the excitability of the parts ; and consequently requires corresponding augmentation of dose, as all people know, who are obliged to obviate constipation of the bowels by purgatives.

The *radical* treatment, therefore, should be founded on more general principles. We consider *exercise* as one of the greatest promoters of the internal, as well as the cutaneous secretions. If this measure alone were carried to a certain extent, it would remove constipation of the bowels in nine cases out of ten ; but in the higher walks of life, and among the sedentary classes of all ranks, this measure can rarely be put in force.

The next most general remedy is to be applied through the medium of the skin. A critic, in a cotemporary Journal, has lately discovered a *reverse* sympathy between the skin and the glandular organs of the abdomen, and teaches us that when the functions of the skin are increased, those of the liver and intestines are lessened ; and *vice versa*. Now this doctrine, although it looks very well *on paper*, has unfortunately but little foundation in nature ; still it is *scientific*, the critic informs us, and consequently it is far preferable to the dull doctrines of *fact*. Every practitioner of observation, indeed, well knows that *excessive and inordinate* secretion from the skin will lessen the watery secretions from the kidneys and mucous membrane of the intestines, and that in dysentery and diabetes the perspiration is diminished. This, the critic having learned from books, he draws the sweeping conclusion of a *reverse* sympathy between the surface and internal organs, as always in operation ! Yet those *unscientific* observers who happen to have studied at the bedside of sickness, as well as in the library, know that there is not a more certain means of *increasing* the secretions of the glandular

organs of the abdomen, than by *increasing* the functions of the skin, keeping within the range of excess above alluded to. This is a matter of fact so well known to every practical man, that we shall not go into any farther arguments with a critic who has plainly proved himself to be totally unacquainted with the subject on which he has written with so much confidence.

But to return. Both the warm and cold bath may be usefully employed in rousing the functions of the skin, and through it the functions of the abdominal viscera, in cases of habitual constipation. The bath, impregnated with mineral acids, is also more powerful than the plain bath. Of this we are assured by personal observation; and we know that some of the first—and the *very first* physician of the age we live in, are of a similar opinion. Let those who, through prejudice, decline making the trial of this valuable auxiliary, take the consequence, in the loss of their patients, and the enhancement of their rivals' reputation. This last argument, the *ultima-ratio medicorum*, will have more effect, by the by, than any thing we can say in behalf of a useful auxiliary, which would often save the patient a great deal of mercurial and other rough remedies, by which the tone of their digestive organs is frequently injured.

Early rising, and walking before breakfast, we have found useful in constipation of the bowels; and so is a large glass of cold or warm water taken immediately on getting out of bed. The use of flannel, in hot weather, by which too much perspiration is carried off by the skin, has a tendency to constipate the bowels; but we have observed that the constipation from this cause is rarely productive of any bad consequences. It is where the skin and glandular organs are all torpid together that mischief most readily takes place.

Of all remedies perhaps for constitutional constipation, injections are the most effectual, because the most easily employed. The habit of using enemata in this country, is rapidly increasing; and it is one of the best habits we have imported from our continental neighbours. Tepid water, with a little soap, we have found the best injection. It empties the rectum and lower portion of the colon, without any stimulus, which might ultimately render the gut insensible to the operation of clysters; while the action of the rectum appears to be communicated to the upper portions of gut, and thus a general progression of the *æcal* remains effected.

In respect to medicines, we have found small doses of the quicksilver pill at bed-time, with Epsom salts, or magnesia and rhubarb in the morning, the most generally useful laxa-

tives. But the whole class of eccoprotics must be occasionally had recourse to; especially where the auxiliary power of the nitro-muriatic acid bath is rejected through the prejudice of patient or practitioner.

In closing this article, we must request Mr. Howship to accept our best thanks for the information which the perusal of his work has afforded us, respecting several important and harassing complaints. We have no doubt but the profession generally will also profit by the experience and accurate observation of our author.

VI.

An Essay on the Means of lessening Pain and facilitating certain Cases of difficult Parturition. By WILLIAM P. DEWEES, M. D. Philadelphia. 8vo. pp. 156.*

It is with much satisfaction that we notice this Essay. Its subject is so important and so interesting to humanity, that, in bestowing more than an ordinary share of attention upon its contents, we hope to perform a service by no means unacceptable to our readers.

The author, whose experience has been very extensive, and whose character as a successful and scientific accoucheur ranks very high, is entitled to great attention; he writes like a practical man, and, therefore, writes usefully. Sensible of the very great deference which is due to the experience and opinions of Dr. Dewees, we will not pretend to enter into a critical examination of his doctrines and practice, but proceed to give an analytical account of his Essay.

After having described the anatomy of the uterus, the author proceeds to the physiological consideration of this organ, in relation to its functions in the process of parturition. The views which he takes on this head are original, and he supports them with much ingenuity of argument.

The uterus has always been considered as one individual organ, with regard to the functions of its different parts; that is, the body, neck, and fundus of this organ, are held as a single viscus, whose actions are similar and dependent on each other. To this opinion Dr. Dewees objects: he observes,

* This being a strictly Analytical Review, we have inserted it nearly verbatim, from the first volume of the AMERICAN MEDICAL RECORDER. Editor.

"I cannot help regarding the neck of the uterus as a distinct and independent part from the body and fundus, and as having its own peculiar laws and actions; and that this separation of powers is absolutely necessary to the explanation of some of the phenomena exhibited by health and disease, and the influence of certain agents on these parts." 193.

His reasons for thinking so are,

1. The fundus and body may be greatly distended, without affecting the condition of the neck; thus, during the first six months of pregnancy, the former parts are generally distended, whilst the latter part remains nearly unaltered.

2. After the sixth or seventh month, the neck begins to unfold, whilst the other parts remain nearly stationary.

3. The neck may be affected by disease, while the fundus and body remain free; and *vice versa*.

4. The different conditions in which these parts of the uterus are at the same time. In labour, the office of the body and fundus is diametrically opposite to that of the neck; whilst the former contract, the latter expands.

The author does not accord with those who believe that the mouth of the uterus, in a natural and favourable labour, is dilated by the mechanical power of the ovum, forcing it asunder, as it were, by a wedge. His reasons for dissenting from the commonly received opinion on this head, appear to us very ingenious and altogether valid. As it appears evident, that the *circular* must be weaker than the *longitudinal* fibres of the uterus, the dilatation of the mouth of this organ, during the first stage of labour, is considered by the author, as the necessary result of the contraction of this latter set of fibres, which alone seem to be concerned in the propulsion of the foetus.

"By the contraction (says he) of the longitudinal fibres, the length of the uterus diminishes; this puts the circular fibres upon the stretch, since the uterus cannot diminish in one direction, while the mouth of the uterus remains shut, without augmenting in another; therefore the circular fibres are a little distracted, and they immediately co-operate with the longitudinal, and force the uterus, with its contents, lower into the pelvis. This kind of action is reciprocated for some time; but the circular fibres eventually yield to the influence of the longitudinal; first, from their having expended a portion of their power in maintaining a state of contraction so long; and, secondly, from their being absolutely the weaker fibres. Hence the circular fibres of the neck relax; and hence the dilatation of the mouth of the uterus." 194.

Under the head "of the contraction of the fundus and body of the uterus," the author advances the following positions.

1. "The contraction of the circular fibres is not attended with pain.
2. "Their contraction, however violent, does not forward the child.
3. "They do not possess the power of alternate contraction in the same degree as the longitudinal fibres ; and that they may exert this power, it is necessary, at first, to have them distracted by some force or other.
4. "The pain in labour depends, in a great measure, if not entirely, upon the contraction of the longitudinal fibres.
5. "The changes which the uterus has suffered from civilization and refinement must be chiefly confined to its longitudinal fibres." p. 195.

The arguments offered in support of these positions are both ingenious and forcible. There is also much ingenuity and appearance of correctness in our author's mode of accounting for those changes which refinement and civilization have produced in the female constitution, and which renders parturition more painful and tedious than it is with the women of savage nations. He says,

"From what has been said, it appears that the pain attending uterine contractions, depends upon certain physical changes, which the longitudinal fibres have undergone from the cause just mentioned, (i. e. civilization and refinement.) Why a particular set or given direction of fibres should have suffered more than another may be impossible to determine ; but that they have, we believe to be most certain. This change, however, is by no means confined to the uterus, as every straight muscle of the body appears to have participated with it, since it is admitted that the man of the civilized world has lost much of his original strength. On the other hand, the circular muscles, as far as we can determine, have lost nothing of their primitive power ; since it is more than probable, that the various sphincters, among which may be reckoned the circular fibres of the mouth of the uterus, perform their duty as effectually, and as powerfully, as in the time of our first parents." 195.

The cause of pain and difficulty of labour, consisting for the most part in a certain condition of the soft parts immediately concerned in labour, and especially in *an unnatural rigidity of the mouth of the uterus*, is next considered under the following heads.

1. When rigidity arises from the circular fibres maintaining their contraction too long ; but unattended with inflammation.
2. Rigidity attended with inflammation.
3. Rigidity arising from previous local injury.
4. Relative rigidity, proceeding from disproportionate powers between the longitudinal and circular fibres.

5. Tonic rigidity, where the circular fibres remote from the mouth embrace the child too powerfully.

Rigidity of the first kind is subdivided into three varieties :

A. Where the subject is very young, arising, as the author supposes, from the uterus not having yet had its complete state of development when impregnation took place ; though sufficiently for the purpose of gestation. B. Where the subject is not very young. The parts concerned in parturition, not having been employed early, according to the design of nature, seem to have forgot a part of their duty. In this variety much benefit may be derived from the use of an antiphlogistic diet, keeping the bowels freely opened, and occasionally losing blood some time before the period of gestation. C. Where the action of the uterus is prematurely excited. As it must be always useful to be able to distinguish this variety from the two last mentioned, the following remarks are mentioned as, for the most part, indicating this variety. 1. When the uterus is prematurely excited into action, (as at the eighth month) we can sometimes feel the os tincæ. 2. When the mouth of the uterus is found rigid, both in the absence and presence of pain. 3. When the membranes, touched through the mouth of the uterus, are found less tense than when the uterus is naturally disposed to labour. 4. When the pains are more irregular in their succession and continuance. 5. When "there is no secretion of mucus, nor disposition in the perinæum to relax." 6. When "there is no immediate subsiding of the abdominal tumours."

Rigidity with Inflammation. The three varieties mentioned above, are all liable to inflammation : 1st. From local irritation either of the presenting part acting mechanically on the mouth of the uterus, or from the improper interference of the midwife. 2. From improper diet or drink.

"When inflammation comes on, the woman becomes extremely restless, and does not enjoy the calm which is common at the cessation of pain ; the vagina becomes hot and dry ; the mouth of the uterus thickens and becomes more yielding ; the secretion of mucus, if it had taken place, ceases ; the pulse becomes quick, frequent, and hard ; the respiration hurried ; the head much pained ; the face flushed ; great thirst ; the skin hot and dry, or profusely sweating." p. 196.

Relative Rigidity. This may happen from a variety of causes, but we shall only notice one ; namely, a kind of apoplexy of the uterus.

"This is known by labour having come on kindly at first, and gradually diminishing in force ; by the mouth of the uterus having a disposition to dilate ; by its thickening ; by the presenting part

not protruding during pain ; by the pain extending itself all over the abdomen ; by the woman's complaining of a sense of suffocation ; by a hard and full, or depressed or labouring pulse ; by the irregularity of the pains both in force and frequency." 197.

Tonic Rigidity. "This only occurs where the waters have drained off a long time, and the whole of the internal surface of the uterus is closely applied to the body of the child."

After having spoken of the various causes of rigidity, the author proceeds to "say a few words on the principal remedies which have been employed with a view to relieve it."

Opium. This still continues a favourite remedy with most accoucheurs, for the rigidity of the os uteri. The author objects strenuously to its employment in such cases. He says,

"I have often tried it myself, and have often seen it employed by others, without, in a single instance, producing the effect for which it was prescribed ; sometimes it evidently did harm. It has, however, undoubtedly been used with advantage in those cases where the uterus had been prematurely excited into action ; it has suspended the contractions until the proper time ; and when they were renewed, the uterus was healthily disposed, and the labour soon finished. But here it was given not to dilate the mouth of the uterus, but to suspend the contractions of the longitudinal fibres. Nor can this article be considered as an innocent one ; we believe it to be extremely mischievous, in many cases converting the rigidity without inflammation or fever, into those with them. This I have more than once seen, and but too frequently had reason to regret." 197.

Warm Bath. This remedy is not much to be depended upon. The author says, "the result of my experience, inquiries, and observations, on this point, may be reduced to three heads :"

1. It is almost always inconvenient.
2. It is sometimes ineligible.
3. It is always limited, and uncertain in its effects.

Blood-letting. "This remedy (says the author) is by no means a new one in labour ; but employed for the express purpose of diminishing pain, and subduing the various species of rigidity just spoken of, and carried to an extent that will ensure these objects, that is, diminishing pain, disposing the os uteri to dilate, the external parts to unfold, and cicatrices to yield, originated, as far as I know, with myself." "We can (he continues) recommend with a confidence, that should only be produced by experience, this operation, not only as a safe, but a certain remedy for all the objects we have just mentioned. This remedy was at first suggested to me by accident. In the summer of 1789, I settled at Abington, and was quickly introduced to a large share of obstetrical practice ; in Sep-

tember of that year, my attendance was bespoke for Mrs. W——, whom I was informed had suffered every thing but death, from her labours; the crotchet had several times been employed to effect the delivery of her children. She looked forward with great solicitude and apprehension; and, indeed, almost considering herself a certain victim to the approaching labour. I had also very great fears for my patient, as I was young, and had not much experience; these forebodings were very much augmented, by my being called to her under a severe hæmorrhage from the lungs, which quickly reduced her to a state of extreme debility. Before she recovered from this state of weakness, she was taken suddenly in labour, which increased my apprehensions almost to despair, lest she should die under my hands. As I approached the house, I was met by several of her friends, who, with great earnestness, begged me for God's sake to make all possible haste; I proceeded immediately to her bed side, and in about fifteen minutes delivered her of a fine healthy child. No accident supervened." 198.

Thus receiving an important hint from nature, he resolved to imitate this example in the first case that should occur to him, where delivery was rendered tedious or painful, by rigidity of the parts. He very soon met with an opportunity of putting this new plan of treatment into practice; and the result was highly satisfactory.

Twenty-three cases are related by the author, in which copious and prompt bleeding was employed with the most happy effect. We cannot give a more correct and satisfactory view of this practice, than by transcribing a few of these cases.

"*Case 3.* June 11th, 1792. Mrs. F——, aged seventeen, very small of her age, never menstruated until after marriage; was taken in labour with her first child; pain came on very gradually for the first few hours, then augmented very considerably for some time, and then subsided almost altogether; this flagging of the pains was considered as a proof of weakness, and to obviate it, stimulating drinks were liberally given; pepper, thyme, ginger, and onion-tea, had each their trial, without advancing the labour. Her friends became alarmed, and I was sent for; I found her with much fever, severe pains, profuse sweats, hot vagina, swelled labia, and rigid os tincæ. I proposed to bleed her, but this she would not permit; she was placed in the warm bath by way of substitute; mild drinks were given, and her bowels were opened by injection. Warm water was frequently thrown up the vagina, but without any observable effect; I again proposed the bleeding, but it was again rejected. As I had observed that bleeding had done good almost in proportion to the sickness it excited, I thought of giving emetic tartar in small doses, until nausea was produced; I soon brought the stomach to this state, which was kept up with considerable severity for two hours, but without any good effect. I now urged the bleeding as the

only chance of benefiting her; to this, at length, she reluctantly submitted. She was bled twice in an hour, the last of which was copious, and had the long looked-for effect; the uterus dilated almost instantly after the bleeding, and the external parts yielded without any difficulty: the child was delivered in half an hour."

"*Var. 2. Case 4* August 30, 1790. M. M. in labour with her third child; she had suffered very severe pains for thirty-six hours; the waters had been evacuated twelve hours; the vagina hot and dry; the external parts much swollen; the mouth of the uterus thick, firm, and but little dilated; much fever; bounding pulse; severe headach; great thirst; much anxiety and restlessness. I bled to about fifteen ounces, but with no evident advantage. At the end of an hour she was bled twenty ounces more; this seemed to affect her considerably, but its use was transient. She was presently bled twenty ounces more; she became extremely sick, the parts quickly dilated, and she was delivered in half an hour more."

"*Case 14.* February 13th, 1805. Mrs. C—, with her first child; she had been forty-eight hours in labour when I was called; the waters had discharged fourteen hours; her pains severe, but irregular: the mouth of the uterus open to about the size of a quarter of a dollar, but very rigid; the vagina, &c very hot and tender; pulse frequent and hard; she supposed she had just entered her eighth month, and was seized with pains in consequence of a fall; a midwife was sent for, and she endeavoured, by stimulating drinks, frequent and rude touching, to provoke labour. She was bled twice in four hours, to the amount of twenty-two ounces; received a purgative injection, which operated well, but without producing any change in the uterus. The head presented naturally. Two hours more were allowed to pass, with a hope of things doing better; but no alteration being produced, I made Mr. King (a young gentleman who staid, at my request, with the patient) tie up her arm while standing on her feet, and take blood until she nearly fainted; she was then laid in the bed, and after an exemption from pain for about fifteen minutes, they came on very rapidly; the mouth of the uterus was found completely dilated, and the child was delivered in a quarter of an hour more." 200.

Having stated a variety of cases of difficult and painful labour from rigidity, our author goes on to speak of difficulty of labour, arising from want of force in the uterus. In such cases, Dr. Dewees considers the ergot a very valuable remedy. "It would appear, (he says) from all I have been able to collect, and from all I have observed, that it rarely fails or disappoints, when properly prescribed."

It appears, by a paragraph quoted from the Dict. Rais. Univers. d'Hist. Natur. of Bonare, that the ergot was in common use before the year 1774. "and was prescribed for the very cases, for which it is at present given; and that the

effects noticed after its exhibition, were as prompt as they are now found to be."

"This remedy (our author remarks) is regarded as a stimulant of no mean power; but I must confess, I have never witnessed any direct operation upon the sanguiferous system. I have therefore, of late, paid little attention to the state of the system, when about to exhibit it. Its operation appears to be very evanescent, and to be exclusively confined to the muscular fibres of the uterus. Indeed, it appears to be one of those rare substances, which are justly entitled to the name of specifics."

The situations in which the exhibition of this article becomes proper, are,

1. Where, from long and violent efforts to overcome rigidity, the contractions of the uterus become feeble, and, though the soft parts may at last be relaxed, are insufficient to propel the fœtus.

2. Where the efforts of the uterus, though slow, and not very powerful, yet, if sufficiently long continued, may effect the delivery, and the labour be complicated by any accident which would render its speedy termination desirable.

3. Where the head of the child has been separated from its body, and left within the uterus.

4. "Where the placenta has been prevented from being thrown off."

5. In dysmenorrhœa.

We have thus given a full account of this excellent Essay. It is written in a perspicuous and unaffected style. The subject is well arranged, the reasoning ingenious and logical, and the matter well condensed.

VII.

INSANITY.

1. *Sound Mind ; or, Contributions to the Natural History and Physiology of the Human Intellect.* By JOHN HASLAM, M. D. Octavo, pp. 192. London, 1819.

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2. *An Inquiry into certain Errors relative to Insanity, and their Consequences : Physical, Moral, and Civil.* By GEORGE MAN BURROWS, M. D. F. L. S. &c. &c. &c. Octavo, pp. 320. London, 1820.

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3. *On Mental Derangements.* By M. ESQUIROL, M. D. Physician to the Salpêtrière, &c. &c.
[Art. FOLIE, Dict. des Sciences Med.]

" Huic ego vulgum
Errori similem cunctum insanire docebo." HOR.

The union of mind and matter is a mystery that will never be solved by man ; and consequently, the disquisitions on it will be interminable. The intimate connexion or absolute dependence of mind on matter, will ever furnish the materialist with unexhaustible arguments for their identity ; while the wide range of phenomena exhibited by the operations of mind, and which are totally inexplicable by the known laws of matter, will furnish abundant arguments for the Platonic Philosopher to vindicate the existence of that—

Divinity that stirs within us,
And points out an eternity to Man !

We will not, therefore, involve ourselves in metaphysical speculations ; but keep to the usual line of our policy, practical pathology and therapeutics.

Of the three works which lie before us, the two first afford us comparatively few materials for the construction of this article ; Dr. Haslam's Essay being almost entirely composed of elementary and physiological facts and deductions, well known to every physiologist and philosopher ; while the work of Dr. Burrows, though exceedingly important in its way, turns chiefly on the correction of certain moral, civil, and popular errors attending insanity. the Insane. and Lunatic Asylums.

A perusal of Dr. Haslam's Essay will convince any man that the author's *mind is sound*, his judgment correct, his perceptions clear, and his deductions legitimate. The style of his work too is of a very superior kind, and might be taken as a model for philosophical and medical disquisitions.

From Dr. Haslam's concluding chapter we shall condense some reflections, and exhibit some specimens that *may* prove interesting to the reader, and *must* prove honourable to the writer.

Dr. H. well observes, that a contemplation of every gradation of mental energy, from man to the maggot, impresses us with the evidence of appropriate contrivance and wisdom. The mental endowments, however, which animals possess, keep them stationary. They cannot comprehend; and if they did, they want the means to communicate, consequently every attainment perishes with the individual.

"As they have not been endowed with the capacity to enumerate, they can experience no solicitude for the past, nor apprehensions for the future. In the Grammar of Animals, the present is the only tense;* and to punish them for the faults they had formerly committed, would be equally absurd and tyrannical. They are not the creatures of compact, and being unable to comprehend the nature of institutions, and obligation of laws, they cannot be responsible agents." 187.

The above truths only go to prove that animals are not amenable to human laws; and the conclusion is, that a future state of existence for them is highly improbable—for *there* too, they could not be justly punished or rewarded.

The features of the human mind are very differently shaped, "and strongly indicate an ulterior destination." Man is rapidly progressive, his mind becoming opulent from the intellectual treasures of his ancestors, which he bequeaths, in turn, to his posterity.

"Had he, like animals, been gifted with intuitive wisdom, the donation would have been so perfect, as to render instruction superfluous; and such endowments would have diminished the measure of his responsibility. The freedom of his will, by which is to be understood the impulse of reason, not the blind dictates of appetite, nor the sallies of tumultuous passions, renders him amenable." 190

Man alone can repent; retracing the acts of former commission, and resolving on melioration for the future.

"In proportion to our love and estimation of justice, we must be satisfied that, under the present forms of government, it is but im-

* This is going rather too far. The bee in constructing his cell, and the beaver his house, certainly appear to know something of the future tense, as well as the present. *Rev.*

perfectly administered : the rewards and punishments in this life will ever be blended with the hopes and fears, the interests and passions of our species ; and there is much of evil, which human sagacity cannot detect. When we consider the attributes of Deity and the nature of Man, we can never be induced to conclude that the tribunals of this world are the courts of final retribution. Man bears in his intellectual construction the badge of moral responsibility ; and consequently, the germ of future existence : and the only incentive that can urge him to the advancement of science, and the practice of virtue, is the reward that Revelation has unfolded " P. 192.

From these sublime and momentous reflections, we must descend to the concerns of our frail and perishable existence, in this sublunary scene. We come, therefore, to the work of Dr. Burrows.

Our author justly conceives, that the scholastic dogma of insanity being a disease of the *mind*, as an immaterial essence, has been very prejudicial, by directing the practitioner's attention entirely to moral remedies, where the predicate, he thinks, may be safely hazarded. "that he who relies, singly, on moral means, will be as surely disappointed, as he who resorts to the art of medicine only, for the cure of insanity." 7.

Dr. Burrows seems to have good reason for believing, that the curability of insanity is considerably underrated by the world at large. In short, the *cures* of insanity are as carefully concealed in families, as the disease itself. No eclat attends them.

"The physician by whose skill they are accomplished is never mentioned. There is only the darker side of the picture presented to the public view ; and consequently a reproach, severer than deserved, attaches to the healing art." 10.

Among the prevailing errors regarding insanity, our intelligent author ranks, 1st. its difficulty of cure ; 2d. that insanity is an increasing malady ; 3d. that insanity is an exceedingly prevalent malady. This leads him to open the body of the work with a discussion on the above topics.

1. *Is Insanity curable ; and in what proportion ?*

Although the records of Lunatic Asylums are very defective, yet : o : numerous returns which our author has collected, with great industry and expense, from several private, and all the public establishments for the insane in England and Scotland, Dr. Burrows concludes, that not only is insanity a curable disease, but "that a very large proportion of lunatics, under a proper system of management, actually recover." 36.

The second question is, whether Insanity be as susceptible of cure as other maladies?

Without discussing the question whether insanity, like most other diseases, has its access, crisis, and decline, this much is certain, that "the difficulty of cure is more or less, according to the time which has elapsed since the incipient attack, or the complication of mental with bodily complaints." We apprehend that Dr. Burrows would have been more correct to have said "*moral with physical*," than "mental with corporeal;" since all acknowledge now that insanity is a *corporeal* disease, either of function or structure. But this is of no consequence.

Now it unfortunately happens, as Dr. Burrows well observes, that the approach of insanity, though generally perceptible, especially to strangers, is rarely remarked by relations; but is construed into nervous irritability, or eccentricity, or any thing rather than the right. The complaint is suffered to proceed till some terrible exacerbation of delirious fury or despondency ensues, and the malady is thus confirmed in one whose intellects, very probably, might have been preserved, had timely aid been administered. Thus, "did mental derangement experience the same prompt attention as most other complaints, it is impossible to judge how much more favourable the results might prove." But, as Dr. Burrows justly observes, the reverse almost always obtains; and consequently, insanity more frequently degenerates into a chronic or continued type than any other disease, and has not the same advantage from the means of cure.

In addition to the above obstacles, there is too often opposed to the exertions of the physician, the influence of pride, suspicion, deception, and, alas! the avarice, or other interested motive of friends, who very often object openly to the prescription of remedies. Yet, under all these disadvantages, we have incontrovertible evidence how great a proportion of lunatics recover, as the records of public and private Asylums testify. In 1798, Dr. Willis stated in the House of Commons, that nine cases out of ten of insanity recovered, if placed under his care *within three months from the attack*. Doubts of his veracity were then and afterward entertained; but few men ever possessed the essential auxiliaries to success which Dr. Willis did.

"We now see that, in situations, perhaps less promising, eight in ten, and even six in seven *recent* cases are reported, and believed to have actually recovered." 44.

In La Salpêtrière, at Paris, the proportion of cures of recent cases, was, 1806-7, according to Dr. Carter, almost as

high as that of Dr. Willis; and, according to Dr. Veitch's official statement to Parliament, nearly two in three of the recent cases were discharged cured, while only five out of one hundred and fifty-two old cases recovered. In Dr. Burrows's own practice, of about three hundred cases, the proportion of cures exceeds any which is here stated; being ninety-one per cent. in recent, and thirty-five per cent. in chronic. Upon the whole, our author thinks he is justified in concluding, that insanity is fully as curable as the general run of other diseases.

The next question is—"Is Insanity an increasing malady?"

Mental derangement has been truly designated the "vice of civilization;" for the more polished and artificial the people are, the more prone are they to insanity. In Spain, where the inhabitants are more characterized by primitive manners, especially temperance, mania is said to be comparatively rare; while the unsophisticated Aborigines of North and South America, are reported by Rush and Humboldt to be wholly exempt from this visitation.

All the physical causes of insanity Dr. Burrows considers to be *extraneous* or artificial, except one; to wit, hereditary predisposition, or that peculiarity of organization transmitted from parent to progeny, and "which alone can be rationally supposed to have a progressive operation in augmenting the number of the insane." To this we cannot entirely subscribe. Dr. Burrows, in the preceding page, acknowledges that the more polished and artificial the people, the more prone are they to insanity. It follows, surely, from this, that the progress of civilization augments the *causes* of insanity, and consequently the number of the insane. That civilization, refinement, luxury, and effeminacy, are, at this moment, on the increase, we believe few will be inclined to deny. We conceive too, that the more *thinking* a nation becomes, the more prone will it be to mental derangement. Learning is every hour increasing throughout the lower orders of society, and we all know—

"That shallow draughts intoxicate the brain;"

nor is it likely the aforesaid classes shall drink so deeply at the fountain of knowledge as that it shall "sober them again." When we come to Dr. Esquirol's work, it will be seen how powerfully scepticism and materialism have tended to destroy the happiness of the French people, and conduced to insanity and suicide. It is a melancholy truth, that irreligion and scepticism are making rapid strides in this country, and the consequences will be doubtless the same as in France. It is

from a general view of these circumstances, rather than from the numerical returns of Lunatic Asylums, that we would be led to the conclusion, that insanity has increased and is increasing.

The following extract from a private letter of Dr. Halloran's to a physician of the metropolis, shows that in Ireland, at least, insanity is on the increase.

"With us it is but too obvious that this malady is still greatly on the increase; and the misfortune is, that we have not even yet seen the worst of it. The desperate break-up of property here, among the speculative farmers, and *middle men*, as they are called, who, for a series of years, were in the enjoyment of affluence, is beyond all belief. To these, in particular, now reduced to actual poverty, in numerous instances, may be ascribed the extraordinary run of maniacal cases which, in fact, are daily offering; and who, on feeling their individual share of the general crash, are unable to bear the reverse of circumstances to which they are exposed. In order to drown care, therefore, they become an easy prey to the effects of drunkenness, want, and disappointment combined."

To such an extent has the misfortune arisen, that the public Asylum at Cork is now overloaded with fifty cases more than it is calculated to hold, and the Grand Jurors have voted a sum of 4400*l.* to be laid out, under Dr. Halloran's superintendence, in the construction of increased accommodation for the insane.

This, by the by, is a tolerable proof of the respect in which the professional and private character of Dr. Halloran is held by his fellow-citizens, though one of our London hypercritics accuses him of ignorance and materialism!

Dr. Burrows enters into a long and critical examination of the registers above mentioned, the aggregate of which exhibit an evident increment of the disease. But we cannot follow our able author in this scrutiny. He has plainly proved that these returns are fraught with error, and exceedingly liable to be influenced by various circumstances that render them weak authority. Still, as we said before, we look to the etiology of insanity, rather than numerical tables, for evidence of its progressive increase.

In the question of the *comparative* prevalence of insanity in this, and other countries, Dr. Burrows has brought forward many important documents, and made some excellent observations. He has clearly proved, that *suicid-* is infinitely more prevalent in Paris, Berlin, Copenhagen, and probably many other capitals, than in London; and thus rescued his country from a common, though unjust, accusation. This section is concluded in the following words,

"But enough, surely, is advanced, to refute the general conclusion, that insanity is extraordinarily prevalent, and that it exceeds in England." 105.

In the next section, indeed, our author attempts to prove, from certain official returns, that insanity has actually decreased within the last few years, which he attributes not to any abatement of the *causes* of the disease, but to a more successful *practice* pursued. That the treatment of insanity, both moral and physical, is improved of late, we are ready to grant; but we are somewhat sceptical, as to the inference which our author has drawn on this point. We must pass over some sections on the state of Lunatic Asylums, and on the condition of the epileptic, fatuous, and idiotic, as not coming within the objects of our Review, though highly creditable to the author and interesting to the public.

The 9th section embraces the question—"Is Religion a cause or an effect of Insanity?"

Dr. Burrows quotes the opinion of the Chancellor de l'Hopital, "that religion has more influence on mankind than all their passions combined." Of this truth, he thinks the whole world is an illustration.

"And as there is no single passion that may not be excited to an excess inducive of mental derangement; so we may readily believe that religion, which influences the internal man more than the passions collectively, may be a cause of insanity. On the other hand, there is no doubt that a lunatic may imbibe a religious, as well as any other hallucination; and yet be insane from a cause very contrary to religious. In the one case, however, it is a cause; in the other, an effect. Now, a great source of error seems to arise from the confounding of this necessary distinction." 173.

We believe that it would be more correct to call it fanaticism than religion, when it produces insanity. The following sentiments, from such a man as Dr. Burrows, will be read with interest in the present times of scepticism and irreligion.

"Religion, it must be acknowledged, is the very essence of humanity. Without it, man has no guide but his passions—no law but his will. Even savages have some notion of a DEITY, or a future state: and although it be not always a GOD of MERCIES they adore, yet, divest them of the sense of a superior and presiding Power, and the character of the people would sustain a material change; and, perhaps, for the worse. What follows, then, when scepticism and infidelity reign? Here Christianity once shed its pure and benign influence? The human mind having lost that prop which was its stay in the hour of need, chaos ensues; despair succeeds to hope; and reason, which establishes man's supremacy on earth, is overthrown. Here insanity supervenes on the defect of religion.

As a cone inverted ; so, we may be assured, is the state of morals where religion has been extinguished ; it is a fabric without a foundation ; and there insanity will emanate and most exceed." P. 178.

Dr. Burrows thinks that, were the remote cause of insanity, when marked by religious exaltation or despondency, to be traced, the lunatic would be found a convert from his original to some new faith—"and that the aberration was usually developed during the transition."

Our author illustrates the above position by five or six very apposite examples, which came within his own cognizance. Indeed, the whole of this section is executed in Dr. Burrows's best style of strong and forcible reasoning. At page 218, there is a passage which we deem worthy of extracting, for the benefit of our readers.

"Were I to allege one cause, which I thought was operating with more force than another, to increase the victims of insanity, I should pronounce, that it was the overweening zeal with which it is attempted to impress on adolescence, the subtle distinctions of theology, and an unrelenting devotion to a dubious doctrine. I have seen so many melancholy cases of young and excellently disposed persons, of respectable families, deranged from either ill-suited or ill-timed religious communication, that I cannot avoid impugning such conduct as an infatuation, which, as long as persevered in, will be a fruitful source of moral evil. The old Romans knew human nature better: they had a law which forbade any person entering upon the sacerdotal office before the age of fifty. This was to prevent theological discussions before an age was attained when a bad effect was not to be apprehended." 218, 219.

Dr. Burrows objects to the commonly-received opinion, that "religious insanity," as it is called, is incurable, or at least extremely difficult of cure. Whenever he has been left to follow his own judgment, however deeply the mind was imbued with religious delusions, he has never, in recent cases, found particular difficulty in curing the patient.

The subject of the 10th section naturally arises out of the preceding:—"the efficacy of religious instruction of lunatics." We entirely agree with Dr. Burrows, that before religious instruction, in any form, be attempted, an intimate knowledge of every patient's state of mind, and of his former and present opinions, should be acquired ; consequently, that no minister can assume this office of instruction, unless he have constant intercourse with the patients, and be well acquainted with each. No man, except a zealot or fanatic, will question the truth of the following passage.

"Suppose a certain number of lunatics were selected, whose

cure, it may be thought, religious instruction will facilitate. Is it not clear, that the spiritual admonitions which may be adapted to one, may be a source of irritation to another? For where men who are called sane, are so exceedingly tenacious about the mere forms and ceremonies of worship, and are thence impelled to acts little short of madness; how can we imagine, that, among a number, some insane, some weak of intellect, and some not confirmed yet in judgment, offence should not be taken, if the doctrine or rites most consonant with each patient's notions, be not preferred? Without, therefore, the utmost precaution, it is not difficult to determine, that the introduction of spiritual subjects must be dangerous, and often injurious." 227.

There are doubtless, as Dr. Burrows observes, many lunatics to whom religious instruction would be extremely useful; but it is evident that this must be exhibited *individually*, and adapted to the particular case. It is extremely problematical if any discourse, however carefully composed, would ever suit a lunatic *audience*.

"It results, that religious instruction must in the first instance, be tried as an experiment; the only safe way in which it can be essayed, is by a previous personal examination of each patient's state of mind and feelings; and if pronounced in a fit frame, there can be no question, that the inculcating of the simple and benign precepts of Christianity, will not only be found an efficacious auxiliary to the restoration of a sane understanding, but to the subsequent preservation of it. For true religion yields to the afflicted—relief; to the sinner—hope; to the repentant—forgiveness; and to all who possess a sound mind, and believe, is "the source of light and life, and joy and genial warmth, and plastic energy." 232.

The remainder of Dr. Burrows's work is principally taken up with "suggestions respecting legislative regulation of Lunatic Asylums. &c." and tables of official and other reports from various Institutions, public and private, for the reception of insane persons. These we cannot enter upon, in a medical review; but refer to the work itself, which does great credit to Dr. Burrows's industry, zeal, and well-known talents.

From his strictly medical work on Insanity, which he has long promised to the profession, and which he still promises, we anticipate a fund of important and useful observations, an account of which we shall not be slow in communicating to our readers. We may remark, in closing this article, that the author has candidly apprized the public that the work is not to be considered as a contribution to *medical science*, in its strict sense; it is consequently written in a familiar, but certainly a neat, and even in some places an elegant style. perfectly appropriate to the subject of the volume.

And now we must take up Dr. Esquirol's Essay on Insanity, which is more adapted to the nature and design of our Review than the two works of our respected countrymen, Drs. Haslam and Burrows.

Among the leading articles in that great national, but unequal work, the *DICTIONNAIRE DES SCIENCES MÉDICALES*, Dr. Esquirol's paper on Insanity holds a distinguished rank, not only on account of the talent, but the extensive experience, and accurate observation of its author. The article occupies eighty pages of the dictionary, and has cost us considerable labour to translate, analyze, and condense it, within the limits of this Review. We hope, however, that we shall render our professional brethren, in this country, some service, by diffusing among them the observations on insanity of an illustrious foreigner, though at the expense of some midnight vigils on our parts.

§ I. The symptoms of insanity relate to an alteration in the thinking faculty—a subversion of the moral affections—lesions of function in the organic life. The sensations of the insane are perverted, and they appear the sport of erroneous impressions. The sense of sight evinces a thousand illusions. The maniac often knows not his friends or relations, frequently mistaking them for strangers or enemies. A great number of insane imagine they *hear voices*, which speak distinctly to them, and with which they hold conversations. These *voices* pursue them, and harass them; by day and by night—in public and private—in their walks—in their travels, and in their closets. The sense of *smelling* does not escape these perversions. •

“*Case in Illustration.* A lady, 27 years of age, in the last stage of phthisis, perceived in her room an odour of charcoal. She immediately conceived that there was a design against her life. She left her lodgings, but the *fumes of charcoal* incessantly pursued her till her death.”

It is not uncommon for the *taste* to be perverted at the commencement of insanity, generally from derangement of the stomach, the perversion disappearing with the cause which produced it. How frequently do we see the alienated deceived in respect to the size, the form, and the weight of things around them. The greater number of them become unhandy in all mechanical occupations, music, writing, &c. The *sense of touch* having lost its peculiar power of correcting the errors of the other senses.



These perversions sometimes affect but one sense, often two—more rarely three—but occasionally all. Errors of hearing and sight, however, are by far the most frequent of the perversions. With these derangements, we also find combined, a *multiplicity* of sensations—a superabundance of ideas, and a versatility of resolutions, produced without order, object, or end. This exuberance of thought permits not the insane to fix his attention long enough on each sensation, and each idea, so as to separate the false from the true—consequently, he becomes incapable of comparing and abstracting. The result is, a fleeting delirium, [*délire fugace*] the object of which is perpetually renewed, in every imaginary form. More generally, however, there is one predominant idea or train of thought, on which the attention is exercised with such intensity, that all others are excluded, or, as it were, swallowed up. This may be termed *Monomania*.

In other cases, the sensations appear to be so weak as to leave little or no impression on the sensorium. The patient remembers only things long past, and no new ideas are formed. Such is idiocy.

In some cases of mental alienation, the person seems beyond the empire of the will, and is no longer master of *his own* determinations. He appears directed by an irresistible impulse, to acts which he himself abhors. One person will feel condemned, as it were, to silence and inaction; another will walk, talk, dance, sing, or write, without the power of stopping. Others again, commit acts of fury, at which they shudder the next moment. All the phenomena of insanity show the vast influence of the *passions* in this affliction. They are always *impetuous*, whether they be of the gay or the sombre cast, in mania, monomania, and melancholia.—In idiocy, they are only such as are founded on the primary wants and impulses of man—as love, anger, jealousy.

In mental derangement, the sense of delicacy is obliterated; and people of the finest previous feelings, will deliver themselves up to the most indecent or culpable actions, without the consciousness of impropriety.

Pusillanimity is a remarkable trait in the character of the insane. They are timid, distrustful—suspicious—never satisfied with their present condition, but always desirous of being where they are not. They have no care for the future—all their anxiety is for the present moment. It is this discontent of mind which detaches them from their parents and friends, and causes them to hate the most, those whom they before most cherished. There are a few exceptions, indeed, where the insane still preserve an inviolate affection for those whom

they previously loved or esteemed : but such affection is without confidence in the objects, to whom they will give no ear in respect to precepts or advice. This alienation from friends is one of the most constant and pathognomonic traits of the malady.

The return of the moral and social affections, within just bounds, the desire of seeing their children, parents, or friends, and of resuming their wonted habits or employments, afford the best hopes of recovery ; and *vice versa*.

§ 11. In respect to *physical* phenomena, we see the vital powers of the insane often exalted to a degree that enables the maniac to resist the influence of very powerful external agents. But this exaltation is not so *general* throughout the system as people imagine. If there be greater force or vital power in one class of organs or parts, there will be a deficit in some others.—Among the physical phenomena of insanity, few are more constant or remarkable than want of sleep, and that peculiarly disagreeable odour from the body, as well as the excretions of the patients, which impregnates the clothes and bedding. Some are devoured with a burning internal heat ; most have a voracious appetite, and constipation or other irregularity of the bowels. A great proportion are afflicted with *pain* in some organ or part, especially the head, the chest, or the abdomen, which the insane generally attribute to the malevolence of their enemies.

From the preceding and many other phenomena, then, mental and corporeal, we may fairly conclude that, in insanity, the vital powers are deranged ; the senses impaired ; the faculties of perceiving, comparing, and associating the ideas, disturbed ; together with more or less lesion of function in the organic life. Such are the *facts*, without any mixture of hypothesis, and without attempt at explanation. Nevertheless, the following hints may be practically useful.

A young man conceived himself at court, and surrounded by courtiers. He prostrated himself at the feet of the supposed sovereign, and became enraged when he saw the servants take liberties with his imaginary king. M. Esquirol caused a bandage to be placed over his eyes for two days, during which the delirium entirely ceased ; but on removing the bandage, the hallucination returned. Reill states, that a woman conceived she saw spectres, and fell into a convulsive delirium. Her maid servant placed her hand over her mistress's eyes, when the latter immediately cried out, "I am well," the spectres having disappeared. These hints are worthy of attention, especially in monomania. The insane, on recovering, preserve a distinct recollection of all that passed during the hallucination.

§ III. M. Esquirol classes insanity in the following order.

A. Monomania or melancholy ; in which the hallucination is confined to a single object, or to a small number of objects.

B. Mania ; in which the hallucination extends to all kinds of objects, and is accompanied by some excitement.

C. Dementia ; wherein the person is rendered incapable of reasoning, in consequence of functional disorder of the brain, not congenital.

D. Idiotism congenital, from original malformation in the organ of thought.

M. Esquirol then presents four figures drawn from life, illustrating these four classes of insanity, with graphic sketches of the patients.

"The first, or example of melancholia, is a young woman, 23 years of age, who was brought into the Salpêtrière in July, 1812, perfectly taciturn, and desirous of being left quietly in her bed. Great difficulty was experienced in persuading her to take food ; but the effusion of cold water conquered her resolution. During the four years that this woman has remained in the hospital, she has scarcely uttered a syllable. She must be taken out of bed, and when placed on a seat she remains in the same attitude the whole day afterward ; the head reclining over the left shoulder ; the arms crossed ; the eyes fixed. The food is put to her mouth, and she eats without changing posture. When placed in bed, she muffles herself up, and remains in the same position the whole night. She is meagre, her skin brown ; her hands and feet often of a violet colour ; pulse slow and feeble ; menses very irregular ; constipation obstinate.

"The next plate represents *mania furibunda*. The unfortunate subject of it is a married woman, 55 years of age, who entered the Salpêtrière, April 1814, in the state above mentioned. She is of tall stature ; hair white and bristled ; eyes blue, sparkling ; haggard ; physiognomy very changeable ; skin pale ; emaciated.

"It appears that some losses in business, injurious reports, and domestic troubles, gave origin to the complaint. Her hallucination was general ; she abused all the world, was excessively violent, and in constant agitation. Warm and cold baths, opiates in large doses, and various other means were tried, in vain. Nothing but the strait waistcoat could secure her. On the 4th of January, 1815, one year after the commencement of the malady, the weather being very cold, she suddenly expired, without any premonitory symptom indicative of such an event. Anatomical investigation could discover no trace of altered structure in any part of the corporeal fabric.

"The third plate presents the profile of a female 70 years of age, who, after having passed several years in a state of *mania furibunda*, is fallen into that of DEMENTIA or idiotism.

"The hallucination of this patient corresponds with her advanced

age and the long duration of the complaint. She preserves a few ideas, which still savour of pride. She believes herself the daughter of Louis XVI. but otherwise there is no coherence ; no memory of recent transactions ; no hopes or fears, desires or aversions. She is calm, peaceable ; sleeps well ; eats without voracity ; and appears perfectly happy.

“ The fourth plate exhibits the profile of an idiot ; a young woman, 21 years of age, who has been in the Salpêtrière three years, without any change. Her head is large and irregularly shaped ; the forehead high and prominent, so that the facial angle is more than 90°. She eats voraciously, and without discrimination ; passes all evacuations involuntarily ; menses regular and abundant ; walks little ; all her movements convulsive ; in short, she is a perfectly helpless infant ; insensible to every thing around ; heat, cold, rain, or even her own internal feelings. She can only utter the words ‘ *papa and mama*,’ which she frequently repeats. No history of her complaint could be procured.”

Having now sketched an outline of the symptomatology of insanity, we proceed to an interesting division of the subject ; its ætiology.

§ IV. *Causes of Insanity.* These are very numerous, both moral and physical. Climate, seasons, age, sex, temperament, profession, modes of life, political situation, civilization, public manners—all exercise an influence in the production of this calamity.

Climate. Insanity does not abound in hot climates, but in the temperate ; especially those which are subject to great atmospherical vicissitudes. The influence of climate on this disease, however, has been exaggerated. Thus Montesquieu attributed the great number of suicides in England to the foggy state of its atmosphere ; but we shall trace the circumstance presently to a more powerful cause.

Insanity is evidently *endemic* in some regions. In marshy countries *idiotism* prevails. *Cretinism* is endemic in the gorges of the Mountains. A member of the Institute informs us that the disease was found only where the soil was *calcareous*.

Season. Extremes of heat and cold, in Europe, conduce to the production of insanity. We see the effects of coups de soleil. The French soldiers, on first going into the hot valleys of Spain, were much affected with insanity : and the same was the case in the disastrous retreat from Russia. Many of the officers and soldiers became insane, the disease being first acute, passing suddenly into the chronic state. In those who died, the dura mater was found very much thickened.

"The insane are greatly disturbed and exasperated by any sudden atmospherical commotion. About the Equinoxes, each Lunatic Asylum presents a scene of louder uproar, and requires stricter discipline, than at other seasons. From tables kept at the Salpêtrière, during the last nine years, it appears that the admissions were most numerous in the months of May, June, July, and August—less so in September, October, November, and December; but least of all, in February and March. The influence of the seasons on the march of the disease bears analogy to the above rule."

In respect to *Lunar* influence M. Esquirol cannot confirm the long prevalent opinion. He observes, that the insane are certainly more agitated about Full Moon; but so are they also about day-break, every morning. Hence, he conceives, the *light* to be the cause of the increased excitement at both those periods. Light, he asserts, frightens some lunatics, pleases others; but agitates ALL.

Some authors have ascribed an occasional *epidemic* character to insanity; as Stegman and Sydenham. It is certain that, in some years, independently of all moral causes, insanity is more prevalent than in others.

Age. Infancy appears to bid defiance almost to insanity, unless there be some congenital malformation, or idiotism be induced by convulsions or epilepsy. Nevertheless our author, and others have met with cases of mania arising in very young people. It is about the age of puberty, however, that the causes of insanity begin to operate powerfully on youth. The disease, at this epoch, of course, is characterized by rapid march, and height of excitement; in adult age, it is more chronic. In early life, it is more commonly complicated with affections of the abdominal viscera, and is relieved by the developement of hæmorrhoids, and by critical discharges from the bowels. At a more advanced age, with paralysis and apoplexy: and is of more difficult cure.

Sex. Upon a comprehensive comparison, it has been found that there is no other disproportion among the insane of both sexes, than among the sane population in general.

Modes of Life. Intense study, especially where the efforts of the mind are directed more exclusively in one channel, predisposes to insanity. But great genius, and well-regulated learning, have no tendency of this kind. If a man, however, meditates incessantly on a particular subject, metaphysical or speculative, all his physical and moral faculties are absorbed, as it were, in the pursuit; his health is neglected; the epigastric viscera become deranged, with torpid chylicification, the result of bad digestion; the secretions are

depraved ; the functions of the skin impeded ; and hypochondriacism or melancholy steals over the devotee of letters and meditation. If these excessive meditations and studies take the channel of religion or fanaticism, then there is great danger that the seat of reason may sooner or later give way. Various epochs have been remarkable for the prevalence of insanity ; as the times of the Crusades ; the Calvinistic and Lutheran disputations, revolutions, &c. Liberty and reform gave a strong impulse to insanity in France, "and it is remarkable (says M. Esquirol) that the character of the insanity varied and corresponded with the different storms which burst over our country." *"Il est remarquable que les folies qui ont éclaté depuis trente ans, ont eu pour caractère celui des différents orâges qui ont troublé notre patrie."*

The progress of civilization, too, by laying us so much at the mercy of the vicissitudes of fortune around us, and thereby rendering us morbidly sensible to every occurrence, predisposes astonishingly to insanity. Hence the sceptre, the court, the palace, the high military command, the exchange, and riches themselves, are no protection against this deplorable evil !

Sedentary habits, intoxication, excess in venereal and solitary pleasures, all predispose to, or even excite insanity.

"La masturbation, ce fleau de l'espece humaine, est plus souvent qu'on ne pense, cause de folie, surtout chez les riches."

A twentieth part of the insane females admitted into the Salpêtrière are previously prostitutes. The following melancholy picture presents an awful lesson to the world at large !

"Religion (says our author) no longer obtains, but as a mere ceremony, on certain solemn occasions. She no longer carries consolation or hope to the bosom of the wretched ! Religious morality no more serves as a guide for reason, in the rough and intricate path of life. Cold-blooded selfishness has rooted out every source of feeling ; and there is nowhere to be seen either domestic affection, respect, love, obedience, or reciprocal dependence. Every one lives for himself ; and the ties, which used to connect the present with future generations, are dissolved."

"La religion n'intervient que comme un usage dans les actes les plus solennels de la vie ; elle n'apporte plus ses consolations et l'espérance aux malheureux ; la morale religieuse ne guide plus la raison dans le sentier étroit et difficile de la vie ; le froid egoïsme a desséché toutes les sources du sentiment ; il n'y a plus d'affections domestiques, ni de respect, ni d'amour, ni d'autorité, ni de dépendances reciproques ; chacun vit pour soi ; personne ne forme de ces sages combinaisons, qui liaient à la generation future les generations présentes."

Alas ! if these be the fruits of knowledge, it may be well said that " 'tis folly to be wise."

Great as the horrors of the revolution were, M. Esquirol considers their influence in producing insanity as nothing, compared with the corruption of morals and manners, public and private, resulting from the doctrines of materialism.

The Passions. The first wants of our nature relate to the preservation of the individual, and the reproduction of the species. They are so strong and universal, that they may be termed instincts rather than passions. These last are the fruits of developed intelligence and advanced civilization. Infancy is free from the passions, and consequently, from insanity. As puberty and manhood advance, the instincts come forth in all their strength, and afterward the *factitious passions* take their ascendancy ; as self-interest, ambition, pride, avarice, &c. Now it is, that insanity breaks out, in all its varied forms and characters.

The passions and emotions most productive of this complaint are, love, fear, fright, rage, ambition, reverses of fortune, and greatest of all, *domestic chagrin*, or family dissention, which comprises all the miseries to which poor humanity is liable in this world !

The exhilarating passions or emotions are rarely the cause of insanity. Excessive joy will destroy life, but not reason. Those who become insane, after the sudden acquisition of riches, may attribute the disease to the altered modes of life which result, together with the generation of new passions and desires, rather than to the first emotions of joy on the event.

A signal source of insanity, as M. Pinel observes, is the struggle between the principles of religion, morality, and education, on one side, and the passions on the other. This combat in the breast of man often ends in the loss of reason !

"Moral frequently combine with physical causes in producing mental derangement, especially in women. A young lady, under the menstrual movement, was frightened by a peal of thunder. The catamenia were suppressed ; the head became deranged, and reason did not return till the menses were re-established some months afterward. Another young woman had a safe accouchment. On the seventh day she was suddenly and unexpectedly reproached, in severe terms, by her father. The lochia and the mammary secretions were suppressed ; mania furibunda followed, and required six months for its cure. This combination of moral and physical causes, in fact, is much more commonly the origin of insanity, than either of them singly. But the moral causes predominate far in number and force, over the physical. It is the latter

class, however, that comes more immediately within the province of medicine, and to which we shall now direct our attention."

Hereditary Organization is one of the most common physical causes of insanity, especially among the rich, where it is observable in every *second* case; while among the poor the proportion is one in six. Children born before the commencement of insanity in the parent, are much less liable to the disease than those who are born afterward. This unhappy predisposition is painted in the physiognomy, the exterior configuration, the ideas, the passions, and the habits of the offspring; and it is called into action by much slighter causes than would otherwise be necessary, where there is no hereditary taint. In short, it is perfectly analogous to the congenital predisposition to gout, phthisis, and some other hereditary diseases. This should always be borne in mind, in the education of children, whose parents were insane, and who should be placed as far as possible out of the reach of exciting causes of the disease. Hereditary insanity is not incurable on that account, though the cure is more difficult, and relapse more probable than under opposite circumstances.

The primary cause of insanity is often stamped on the tender fabric of the body, in utero, during lactation, or in the first dentition. Numerous were the women who, during the storms of the revolution, brought forth children, in whom the slightest causes produced insanity. Falls, or blows on the head, during infancy, frequently predispose to, or even excite mental derangement at some future period. Interruptions and irregularities of the menses were traced as the causes of insanity, in the proportion of about one in six; and the return of the catamenial period is, at all times, an epoch of irritation, in female insanity. M. Esquirol was led to attribute the origin of the disease, in many instances, to suppression of leucorrhœa in women, and the hæmorrhoidal discharge in men.

Parturition is a very frequent cause of mental alienation. Out of six hundred females in the Salpêtrière, and M. Esquirol's private asylum, fifty-two dated the origin of their complaints at this epoch. Conception and pregnancy too, he believes, are occasionally the cause of this affection. He saw a young female who had a first attack of insanity immediately after marriage, a second attack at the period of conception, and a third attack during the second pregnancy. Each paroxysm lasted about a fortnight. Mental derangement occasionally takes place during lactation, generally with a preceding suppression of the milk.

Sudden suppression of the cutaneous transpiration is no

uncommon cause of insanity; and it is in this way that atmospheric vicissitudes conduce to its production. A man was subject to copious sweats about the head. He was advised to wash himself with cold water. The perspiration was suppressed; but insanity became established. A young man waded across a rivulet while freely perspiring. He had a rigour on going to bed, and immediately afterward turned maniacal.

Fevers not unfrequently leave a predisposition to insanity, which may not be excited into action till some years afterward, when the fever is forgotten.

The sympathetic irritation of accumulations in the stomach and alimentary canal, has induced this disease, as also worms. A great number of chronic affections, as well by their inconsiderate removal, as by their spontaneous metastasis, have ended in mania. Epilepsy, in particular, is a fruitful source of mental derangement. Of three hundred epileptics in the Salpêtrière, more than half are insane! Hysteria and hypochondriasis too often degenerate into the disease under consideration. The abuse of mercury and opium is occasionally the source of this complaint.

§ V. *Progress of Insanity.* the causes of insanity do not always act *directly* on the brain; more frequently, on the contrary, they are preying on some organ at a distance, the nervous, sanguiferous, or lymphatic systems; the digestive organs, or the organs of generation, being the primary seats of the evil. The *exciting* causes of insanity, moral and physical, sometimes produce the disease *suddenly*, especially in those who are strongly predisposed; but, in by far the greater number of cases, certain functional derangements have been going forward for years before the mental hallucination is developed; such as convulsions, headaches, spasms, constipation, &c. On the other hand, in the intellectual system, we see ebullitions of the passions, or eccentricities of temper, long precursory of the final overthrow of reason.

Insanity is either continued, intermittent, or remittent. The remissions of the disease offer some curious anomalies. A person will pass three months, for instance, in a state of melancholy; the three following months in maniacal excitement; and then three or four months in a state of fatuity; and so successively, with more or less regularity. There are others who only experience paroxysms of excitement at certain hours of the day, days of the week, or even seasons of the year, the intervals being passed in a calm and quiet hallucination.

Insanity appears sometimes to terminate critically, like a fever. A certain change in the countenance, with sense of general lassitude; sleep; appetite; softness of the skin; freedom of the secretions and excretions; and a return of moral feeling, are indicative of approaching recovery. This will be perfect if, with the return of reason, the patient resumes his usual affections, habits, and general character. But if, on the other hand, the functions of the organic life are re-established—if the sleep, the appetite, the secretions, and the excretions come back to their usual healthy standard, without a corresponding sanity of mind, the disease is likely to pass into a chronic state, or fatuity itself.

§ VI. *Curability of Insanity.* From an accurate survey of the records of Lunatic Asyls, we are authorized in concluding, that cures are effected in about one in three cases of insanity. The probability of cure, in individual cases, depends greatly on the previous duration of the disease. M. Esquirol has constantly observed a marked *remission* in the course of the first month, after which it generally passes into the chronic state. It is in the *first* month, therefore, that we have the great probability of success. Physicians are divided in respect to the medium curable period of insanity. Into the Salpêtrière, in ten years, [1804 to 13] were received two thousand eight hundred insane; of whom seven hundred and ninety-five were ultimately pronounced incurable, in consequence of age, fatuity, or complicated diseases, as epilepsy, &c. Six hundred and four were cured in the first year; five hundred and two in the second; eighty-six in the third; forty-one in seven succeeding years. From these facts, we may conclude, 1mo. that, in the two first years of insanity, the greatest number of cures are performed; 2do. that the medium curable period is somewhat less than a year; 3tio. that after the third year, there is not above one in thirty cured. It is true there are few rare instances of restored reason after a period of many years hallucination; but these cases are more calculated to prevent despair than inspire hope. The most favourable epoch of life for the cure of insanity is between the age of 20 and 30. After 50, there is little chance. Mania is more frequently cured than melancholia or monomania. Idiotism and the fatuity of old age are absolutely incurable.

There is a proportion of the insane who can only be restored to a *certain degree* of sanity. These retain a morbid and excessive sensibility to all the causes, moral and physical, which produce the disease. While kept quiet, and unexposed

to any source of irritation, with attention to the general health, they enjoy a considerable share of rationality and tranquillity ; but they are incapable of again mixing with the world, or fulfilling the functions of any office or employment, without risk of complete relapse. These bear a proportion of about one in twenty of the recoveries.

It is evident, from the preceding remarks, that we are more successful *now* in the cure of insanity than formerly. But from all quarters, we hear of the frequency of *relapses*. Let it be remembered, however, that people who have suffered an attack of any disease—for instance, pneumonia, hepatitis, apoplexy, &c. are more easily thrown into a similar disease, in future, by the same causes, in consequence of certain organs being left in a weakened state. But we do not call these *relapses* : they are *now* attacks, not sequelæ of the former ones. The same observations apply to insanity, and with increased force, since the range of moral and physical causes to which a recovered maniac is exposed, far exceeds that of any other disease, while the patient is generally much less on his guard against the causes which lead to a repetition of the attack.

§ VII. Pathology.

“ At this word, our readers may fondly entertain the expectation that we can inform them of the long-sought seat of insanity. But, alas ! we are far from being able to satisfy them ; for dissection has hitherto proved a sterile soil, in this respect ! The phenomena observed by Willis, Mangetus, Bonetus, Morgagni, Gunz, Meckel, Greding, Vicq. D’Azir, Camper, Chaussier, Gall, &c. have led to nothing but negative and contradictory results. In this investigation, it is of the highest importance to distinguish the *effects* of those diseases which occasioned the *death* of the patient, from those which occasioned the *derangement* of the mind. It is by confounding these together, that there has arisen such contrariety of opinion respecting the pathology of insanity. The details of my researches *post mortem*, would be too long for insertion here ; and I shall content myself with presenting the result or conclusions drawn from dissection up to the present day. I do not pretend that these collaries possess a mathematical accuracy ; but I am convinced that they will be found, in general, correct.

“ 1. Vices of conformation, in the *skull*, are peculiar to idiotism, fatuity, and cretinism.

“ 2. Organic lesions of the *encephalon*, or its envelopes, are only observed in those cases of mental derangement complicated with paralysis, convulsions, epilepsy, or where the patient has sunk under diseases with symptoms analogous to the above.

“ 3. Those effusions within the cranium, whether sanguineous or

serous, which we sometimes observe are the *effects* of insanity, or rather of those diseases which destroyed the life of the insane.

"4. The changes of structure in the thorax, abdomen, or pelvis, are evidently, in many cases, totally unconnected with the mental derangement. They sometimes indicate the *remote* cause or seat of the malady, but never the *immediate*.

5. "Every kind of organic lesion observed in the bodies of the insane, has been also found in the bodies of those who never evinced a symptom of insanity.

"6. In numerous and accurate dissections of the insane, no alteration whatever from the healthy structure, could be discovered.

"7. Dissection has shown every portion of the encephalon disorganized, suppurated, or otherwise destroyed, without any derangement of the understanding.

"8. From all these premises and facts, we are authorized to infer that, the *brain* being only the *principal* focus of sensibility, there are cases of insanity dependent merely on lesion of its *vital powers*: that there are other cases, where the disease has *not* its seat in the brain, but in various other foci of sensibility, placed in different regions of the body: but, in all cases, that it is a *corporeal* disease, whether the lesion be organic, or only functional."

§ VIII. *Treatment.* There are three general indications to be kept in view, in the treatment of insanity; namely, to remove the physical disorders, check the aberrations of the understanding, and calm the troubled passions.

Among the ancients, hellebore was the principal remedy. Accident recommended the shower-bath; and after the circulation of the blood was discovered, venesection was carried to extravagance. In England, the treatment of insanity was long kept a secret; but M. Pinel changed the lot of the insane, broke their chains, and reduced their management to a rational system. Since that period, confidence has been inspired by increased success.

According as the causes of mental derangement are of a general or local, a physical or moral nature, so must the treatment be, general or local; physical or moral. And as there is often a combination of causes, so must there also be a combination of remedial measures. *There is no specific treatment of insanity.* In no two individuals are the functional or organic lesions, the symptoms, and the character of the disease, precisely alike. Hence, each particular case requires a thorough investigation, before the treatment adapted to it can be fairly laid down. On this account, we must confine ourselves to such general rules of treatment as are more or less adapted to all; leaving the particular application of them to the discretion of the practitioner, after he has studied the individual case.

We have seen that lesion of the sensations, and of the power of association, through defective attention, produced and kept up the hallucination, as well as the perversions of the passions. Every thing, therefore, which can modify the thinking faculty, and control the passions, is an object of the moral treatment.

The first question bears on *separation* of the insane from friends and home. On the necessity of this measure, the English, French, and German physicians are unanimously agreed. Willis observed that foreigners were more certainly cured in England than the natives. We find the same thing in France. Strangers, sent to Paris for treatment, are more readily restored to reason, than inhabitants of this city.

"The first effect of separation is to produce a train of new sensations, excited by new objects; and thereby to dis sever, more or less, the series of incongruous ideas, from which the patient was previously unable to extricate himself. The consequence is, that he becomes, at this period, more accessible to advice or remonstrance; in short, there is an evident remission of the hallucination, which should be immediately seized on by the physician, for the purpose of gaining the confidence of the patient."

When the insane patient is placed in a proper receptacle, he ought to be under the guidance of one, and *only one* person—and that a physician. Reil, and some others who conceive that there should be a physician, a psychologist, and a moralist, in superintendence on the insane, have no practical knowledge of the subject, and know nothing of the inconvenience, not to say mischief, attending such a triumvirate power. To the medical chief, the domestic attendants must exhibit perfect examples of difference and obedience, for the imitation of the patient; while they themselves wear the appearance of strong delegated power, which will generally render the exercise of it unnecessary, by convincing the insane that all idea of resistance is vain. Interviews with parents and friends must be very cautiously permitted—for the deranged are great children, and children too, whose false ideas have taken a wrong direction.

"Confined thus to a regular life, and an exact discipline, they are naturally led to reflect on this change in their situation; while the necessity of dwelling among, and submitting to the control of strangers, is to them a powerful stimulus to regain their lost freedom and reason."

Some of the insane, on being transferred to a strange place, believe themselves abandoned by their parents and friends. Let the balm of consolation be then poured into their breasts—let them be promised every assistance in once:

more uniting the bonds of social existence, and they will pass from the gloom of despair to the sunshine of hope. This contrast of sentiment, arising out of the presumed abandonment of friends, and the soothing attention of strangers, produces an internal conflict, from which reason sometimes comes forth victorious. Others imagine that they are conducted to these strange habitations to be delivered up to their enemies, or to be sacrificed. If these fears can be conquered by the kind, affable, and humane conduct of those around them, a recovery may be confidently expected.

“The judicious exercise of the faculties of the alienated, conduces much to recovery. This must be done by directly exciting the *attention* of the insane—by presenting new objects to their contemplation—by giving way, in some measure, to their hallucination. If, by these means, their confidence can be gained, the cure is almost certain.”

The *passions* of the insane must be carefully managed. The proud and rebellious passions and emotions must be tamed and kept in subjection, while the timid and melancholy are to be dissipated by encouragement. The art of inspiring *fear* is not of easy management; and ought never to be confided to servants. Many maniacs are incapable of sleeping, while under the depressing influence of fear. This may often be obviated by causing some person to sleep in the room with them, or by leaving a light in their chamber.

It is sometimes proper to substitute a real for an imaginary grievance. Thus a melancholic is devoured with *ennui* in the midst of the pleasures and enjoyments of life. If we withdraw him from his usual habits, and impose on him *real* privations, he will then suffer *real* ennui, which will prove a powerful mean of cure.

“Another believes himself abandoned by his friends, though they are all endeavouring to contribute to his happiness. Deprive him of every testimony of their affection, then he awakes to a sense of his *real* loss, and this is one step towards recovery. Even *physical* sufferings occasionally divert the malady from its mental seat, and relieve the moral evil.”

Sometimes the excitivè passions, as love, ambition, may be dexterously brought to bear on insanity.

A melancholic was in a state of great despondency. He was told that he had a lawsuit on hand. The anxiety to defend his suit soon restored his intellectual energy.—A soldier became deranged in mind. He was told that the campaign was about to open. He demanded permission to rejoin his regiment—was forwarded to head quarters, and arrived there in perfect sanity. In short, the examples are innumerable, of the vast influence of our moral over our physical nature. But the character, disposition, and history of each individual, must be carefully studied, in order to manage the moral treat-

ment with success. Music, well managed, acts with considerable power both on the moral and physical frame: There should be but few instruments, the music placed at a distance, and composed of airs with which the patient was familiar in youth; or which he relished before the mental derangement."

Travelling is a useful remedial measure, in many cases. M. Esquirol has always found the complaint mitigated after a long journey, especially if attended by difficulties and privations, and performed through a strange land, where the attention of the insane was strongly excited.

Travelling is also salutary, in a physical point of view. It rouses the torpid functions, particularly those of the abdominal viscera—conduces to sleep—improves the digestion and the secretions. It is, above all, a useful mean of securing convalescence and recovery. Such are the general indications of the moral treatment of the insane. They have for their final object—to force the *maniac* to live *within* himself—the *melancholic without* himself.—“*Ils ont pour but d'obliger le maniac à vivre en lui-meme, tandis qu'il faut faire vivre le melancholique hors de lui.*”

Hygiene and Pharmaceutics. The insane should have the benefit of free air and ample exercise. Those who are taken ill in a hot country recover best in a cold. Nostalgics, on the other hand, cannot be cured without return to their native soil.

The clothing of the insane, especially of the melancholics, should be warm, so as to encourage and maintain the insensible perspiration. It is an error to imagine that the insane should be deprived of fires, and kept in cold habitations. The administration of food requires much attention. The insane generally devour their victuals with great voracity, and without sufficient mastication. This injures their digestion, and keeps up a source of irritation in the whole line of the alimentary canal. Thirst is also common; therefore, the patient should never be without drink. Wherever there is excitement, the food must be unirritating and small in quantity. Constipation being a very common attendant, the bowels should be sedulously attended to; and all the secretions and excretions promoted by every possible means. For these purposes, exercise in the open air, active or passive, must form a *sine qua non* in the treatment. Every one knows the story of the Scotch farmer, who acquired great celebrity in the cure of the insane. He first took them out to walk with them in his fields, then contrived to quarrel with them, beat them soundly, and afterward yoked them to the harrow, and made them work like horses!

Gardening is an occupation universally applicable to the lower orders of society, and of the greatest use in this complaint. In the upper walks of life, we are obliged to substitute the promenade, music, reading aloud, &c.

To apply *medicines*, with effect, we must first unravel the whole history of the individual and the complaint—ascertain the causes, general and local, which have induced it—the seat, or principal organ affected—whether it is the physical which has first acted on the moral, or the moral on the physical system. What infinite mischief has been done by *Routinists*, in this disease; who, in the sweeping term “insanity,” could see but a *single* affection—derangement of the mind!

When we have combated the general dispositions, and the effects of particular morbid causes, and still the mental alienation continues, then we are authorized in attempting more specific means of treatment. Till then we must vary, incessantly vary, our remedial measures, according to the species of insanity with which we are engaged. We shall here confine our remarks to certain medicines which have been deemed heroic in this complaint.

Baths have been administered to the insane in every way, and at all temperatures. The warm bath is, upon the whole, the most useful. Patients of a thin, nervous, and irritable constitution, may be kept a considerable time in the water, with great benefit. When there is a strong determination to the brain, the head should be kept encircled with cloths wetted with cold water, while the body is immersed in the warm. Excepting where the patient is young, robust, and complaining of internal heat, the *cold* bath is rarely useful. Where the patient's constitution is debilitated by unmanly excesses, the mere *plonging* in cold salt water is occasionally serviceable. Cold *affusion* from a cock or funnel, is sometimes proper; but requires great caution. It is most adapted to young and unruly patients, with determination to the brain.

At the commencement of insanity, where there is head-ach, redness of eyes and face, throbbing of the carotids, &c. *cold*, locally applied to the head, after leeching or cupping, while irritating pediluvia are also employed, produces salutary effects. The bowels should be kept clear by daily clysters of water alone, or water containing purgative ingredients. This measure is too much neglected in England.

Emetics are entitled to considerable rank, especially in melancholia, and where diminished sensibility and torpor prevail. They are dangerous, however, in opposite states of the system, and where there is erythsm of any organ or part.

Purgatives are exceedingly useful, especially those which act on the biliary secretion, and tend to produce the hæmorrhoidal movement and discharge. Purgatives sometimes produce irritation in the system, and interrupt the free functions of the skin. Whenever this is perceived, they should be alternated with the warm bath. A certain degree of irritation in, and determination to, the abdominal viscera, from purgatives, is, however, very useful; and it is in this way that hellebore, gamboge, and other drastic cathartics, have acquired celebrity.

“*Blood-letting* was formerly carried to a most culpable excess. It is indispensable in plethoric subjects, and especially where any long-accustomed hæmorrhage or other evacuation has been suddenly suppressed; but otherwise, *local* blood-letting may almost entirely supersede the lancet in insanity.”

Camphor, musk, tonics, antispasmodics, mercury, &c. are all occasionally useful, in individual cases, especially where the *general* indications have been previously attended to; but they are incapable of universal or indiscriminate application.

Opium. As maniacs sleep badly, opium and other sedatives have been employed; but they are now proscribed by unanimous consent, as dangerous remedies. Regimen and exercise are the only somniferous measures which can be safely recommended. They are generally successful too.

“Setons, blisters, and counter-irritants, are useful where there has been a metastasis: in monomania, with stupor; in puerperal mania, and sometimes in dementia, or fatuity. It has been recommended to blister, or otherwise excoriate the whole surface of the head. I confess that such measures have not succeeded in my hands. They augment the erythism, torment the patient, increase his irritability, and convince the insane that he is a victim to our cruelty. The swing is occasionally useful in refractory cases.”

In respect to the *prevention* of insanity, much might be done by avoiding intermarriages with the insane; by directing the education of youth on stricter principles of religion and morality; by indulging less the caprices and whimsical desires of children, which indulgence unfits them for the rugged journey of life; by not forcing too early the organ of the mind with tasks and exertions beyond its power; by training youth in early regimen and temperance; and, above all, by repressing and controlling each unruly passion as it develops itself from childhood upwards.

In presenting our readers a portrait of this distinguished foreigner's opinions and practices in insanity, we hope and

trust that we do a greater service to the cause of medical science, in this country, than by collecting a mass of ephemeral cases, and fleeting speculations, most of which expire in the very cradle of their existence, and few of which have substantial attractions for re-perusal or reference. Under this conviction, we shall make a point of introducing classical and standard articles of Foreign Medical Literature, from time to time, to the English reader, through the medium of this Journal.

VIII.

A Treatise on the Urethra, Vesica Urinaria, Prostate, and Rectum. By CHARLES BELL, Surgeon to the Middlesex Hospital, Lecturer on Anatomy in the School of Great Windmill Street. A new Edition, with Notes, containing the Criticisms of the Editors of the foreign Editions, and the Opinions of foreign Authors on these diseases, by JOHN SHAW, Surgeon; Demonstrator of Anatomy in the School of Great Windmill Street. One Vol. Octavo, pp. 416, with five Plates. London, 1820.

THIS new Edition may be considered almost a new work; and when we reflect on the talents of the author, the industry of his Annotator, and the opportunities which both have had, of prosecuting a pathological investigation of the diseases above mentioned, we are led to expect a work of great practical merit from their hands; nor in that expectation will the public be disappointed. The author wisely throws himself completely upon his profession.

"There is here no new method of curing stricture proposed; no multiplied cases of success, until the reader must suppose him infallible; no cases to suit the feelings of alarmed patients. On the contrary, he has dwelt only on the difficulties of practice, and has exhibited, with all the force he could command, the dangers we run by rashness." *xx.*

This is as it should be. Talent and application have no occasion to descend to those paltry manœuvres, in which such swarms of needy and greedy adventurers are exercising themselves by day and by night, to gain a temporary PHOSPHORESCENCE which, like that surrounding a decomposing carcase in the dark, is dispelled by the first beams of the rising sun, and exposes to view the disgusting source of the nephritic radiance.

Mr. Shaw opens the work with some accurate and ingenious observations on the anatomy of certain parts of the urethra, and about the neck of the bladder, to which we cannot do justice in an analysis. He maintains, with Mr. Bell, the non-muscularity of the mucous membrane of the urethra; and affirms, that the appearance of circular muscular fibres, which anatomists have described as existing in the membrane of the urethra of the larger animals, is caused by the small vessels running on the outside of the membrane. It is not to be expected that we can decide on these nice points of anatomy; but, as Mr. Shaw admits that "the mucous membrane, though very thin, is elastic," and has the power of contractility, we do not see how it materially affects our practice, whether this contraction result from the action of muscular or of any other kind of fibres. But more of this hereafter. It ought to be practically borne in mind, that the mucous membrane of the urethra may be traced, not only along the internal surface of the bladder, but along the ureters to the pelvis of the kidneys; and, in another direction, from the urethra along the seminal ducts, through the convoluted tubes of the testicle, and into the vesiculæ seminales.

"Thus we can trace an inflammation of the urethra by continuous sympathy into the bladder, producing irritable bladder, into the kidneys, causing nephritis, and along the vas deferens, producing swelled testicle; each of these consequences being as likely to happen from irritation of the urethra, as the inflammation of the mucous membrane of the nose is, in common catarrh, to proceed along the membrane of the trachea into the lungs." 5.

There are some local peculiarities of sympathy here also, which are worthy of being kept in mind: thus, when a bougie enters the neck of an inflamed bladder, it often happens that the patient does not complain of pain at *that part*, but refers it to the glans, and thinks the surgeon holds the glans too tightly. This sympathy is well exemplified in calculus of the bladder. Here Mr. Shaw introduces many excellent anatomical remarks, and two figures, illustrative of the inequalities of diameter and dilatibility of different parts of the urethra, which the surgeon should carefully study. Speaking of the resistance which the circular ligament, posterior to the bulb of the urethra, often gives to the introduction of the catheter or bougie, Mr. Shaw makes the following melancholy reflection, which we fear is too well founded!

"Dissection leads us to suspect that strictures are more frequently made at this part by the surgeons' instruments, than by the effect of inflammation from common irritation."

It has long been a rule to examine the urethra with a large
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in preference to a small bougie ; but it must be recollected, that the sinus pocularis, a lacuna in the posterior part of the canal, at the beginning of the caput Gallinaginis, will admit the point of a bougie of the size of No. 5 ; and in cases of stricture it is larger than in a healthy urethra.

“ When a bougie enters it, the pain is so exceedingly acute, that the patient springs back, even though the rest of the canal may not be at all irritable.”

Indeed, dissection shows it as a matter of constancy, that whenever there has been irritation of any kind in the urethra or bladder, the ducts of the prostate will be found enlarged. “ some of them to such a degree as to admit the point of the largest bougie.”

The first chapter of the work contains many interesting observations on “ the sensibility of the bladder, and some of its morbid affections.” The most irritable point on the internal surface of this receptacle, is directly over the junction of the muscles of the ureters with the internal sphincters of the bladder ; and here the membrane will be found more vascular than at any other part. “ Here is the seat of that sensibility which governs the action of the muscles.” When the stone rests here, the patient suffers great pain, with an *unceasing nisus* to make water.

“ It will sometimes occur, that the inflammation originally seated in the urethra, spreads backward to this spot, and then the call to make water is incessant ; and by the incessant call to action, a general inflammation of the bladder is at length produced.” 13.

We cannot follow Mr. Bell and Mr. Shaw in their important remarks on the action of the muscles surrounding the neck of the bladder and posterior part of the urethra ; but pass on to a subject by no means beneath the dignity of the practical surgeon—*incontinence of urine*. Every one knows how unpleasant it is for children, and still more so for grown people, to make water in bed.

“ This occurrence never takes place, but when the boy is asleep upon his back ; and the cure is a simple one : he is to accustom himself to sleep upon his face or side ; the urine is not passed, nor is he excited to dream of making urine while he keeps this position.

“ The circumstance is unaccountable, until we reflect on the position of this master spring of the muscles of the bladder ; the sensible spot a little behind and below the orifice of the bladder. When a person lies upon his belly, the urine gravitates towards the fundus ; but when he lies on his back, it presses upon this sensible spot, and distends that part of the bladder which is towards the rectum.” 18.

When a child wets the bed, Mr. Bell thinks it is in conse

quence of a dream, excited by the irritation of this sensible spot of the bladder, the urine resting there and stretching the bladder. "If the child be made to lie on the belly, or inclining to that position, with the cheek upon the pillow, the habit will be broken." A more serious incontinence, however, in boys, is sometimes the result of inflammation in the bladder, accompanied by pain and all the symptoms of stone. *Stillicidium urinæ*, from want of action in the sphincter muscles, is generally owing to an increased sensibility in the part of the bladder above mentioned.

As inflammation of the mucous membrane of the fauces will cause suppuration in the arches of the throat, and a long-continued inflammation in the membrane of the larynx, very dangerous suppurations about the cartilages of the larynx; so protracted irritation about the anus will produce abscess and fistula there. The natural susceptibility of the spot behind the orifice of the bladder is very great; and, in its morbid derangement, exquisite. The consequences of abscesses around the prostate gland and vesiculæ siminales are always exceedingly distressing.

"This disease is marked by frequent and painful calls to make urine; by a burning sensation and violent spasms after the urine has been discharged. There is, also, pain in the extremity of the penis as in stone. It is attended with a purulent discharge from the urethra, not continually and in small quantities, but at irregular periods and copiously. The patient is subject to cold shivering and fever; and he is pale, harassed, and wasted. On introducing a bougie, there is violent pain as it enters the neck of the bladder, and it comes out smeared with matter, and, perhaps, bloody matter. On examining per anum, a thickening is felt around the prostate gland or vesiculæ; and the patient experiences pain when you press against the part.

"The causes of this complaint are violent inflammations in the urethra, aggravated by free living and debauchery, and by irritating injections, the unskilful use of bougies, caustic, and cantharides, but most of all, I fear it, in a scrofulous constitution." 21.

Treatment. We must lessen the irritability and diminish the vascular action of the part—dilute and change the quality of the urine. The means are, laxatives: the application of leeches to the anus; emollient and anodyne glysters; mucilaginous drinks, as infusions of linseed, with alkalies and opiates; but all these are inferior in efficacy to *injection of the bladder*.

This operation had not been favourably received by British surgeons; yet Mr. Bell and others,* have found it very useful in relieving irritation at the neck of the bladder. When

* See our Review of Mr. Wadd's Works, No. 8. Quarterly Series.

this state accompanies stricture of the urethra, the bougie is a dangerous instrument, especially in the hands of the patient. "But it is sufficient on these occasions to throw up a little tepid water into the urethra. The presence of the injection brings on the consent of parts, and is followed by discharge of water, with relief." In fits of the stone the injection of tepid water distends the bladder, and removes the calculus from the morbidly sensible spot near its neck. "If two or three ounces of fluid be very slowly injected into the bladder, the excess of pain will be immediately mitigated."

But it is in the case of inflammation and irritation within the neck of the bladder that this injection is of the most essential service. By gradually increasing the quantum of injected fluid, we often relieve the pain, and detect caculi that could not otherwise be felt by the sound. During the past year Mr. Bell employed the remedy in five cases.

"The first of these was a dwarfish boy, who was brought into the hospital with the suspicion of stone : he was sounded twice, and no stone discovered. Some months after, he returned with the same complaint ; a painful and frequent call to make water, with pain in the extremity of the penis. He was put under the charge of a dresser, to have the bladder injected. He expressed himself relieved from the first ; gradually more and more water was admitted into the bladder ; every day the bladder could contain an increased quantity of water ; and, after some weeks, he was dismissed well." 24.

Above all, Mr. Bell recommends the injection of the bladder in the commencement of the disease called "*uvula vesicæ*." When there is an inordinate irritation of the sensible spot at the neck of the bladder, nothing is so likely to allay the irritation. The rationale is obvious enough. We soothe the irritability of the part by substituting the tepid water for the acrid urine, and by diluting the latter, as it secretes from the kidneys. "Besides, by this injection of the bladder, the ropy mucus and the purulent secretion, when there is any, are washed away, and that sort of *tenesmus vesicæ*, caused by their presence, is relieved."

The second chapter is very valuable, and greatly enriched by the judicious notes collected by Mr. Shaw, from foreign authorities. It is on the cases requiring the aid of instruments to draw off the urine. These are, paralysis of the bladder ; spasm and irregular action of the muscles at the neck of the bladder ; injuries committed on the perineum by falls, kicks, &c. ; diseases of the rectum ; the plugging up of the urethra by small calculi, &c. ; extravasation of blood compressing the urethra ; disease of the prostate gland : stricture of the urethra.

Under the first head, our author introduces many important observations and reflections relative to the loss of tone in the bladder, from too long retention of the urine; and also on the necessity of attending to a case of this kind for some time after you draw off the water by the catheter, as the retention is apt to recur again and again.

Speaking of suppression of urine from spasm and irregular action of the muscles at the neck of the bladder, Mr. Bell observes:

“It is said, that in such a case we are not immediately to introduce the catheter; but that we ought to bleed the patient, and apply leeches to the perineum, and fomentations, or put him into the warm bath. But I must confess, when I have seen a man in indescribable agony, moving about my room, with his body bent to an angle, and when I have understood that before this attack his urethra was free, and that now the bladder can be distinguished above the pubis, I have followed the dictates of common sense and common charity, I have done that, which I knew would immediately relieve him, and with perfect safety; I have introduced the catheter, and have drawn off the urine.” 38.

When, indeed, the retention is owing to a stricture in the urethra, then we must be cautious in the use of instruments; for if the attempt does not succeed, the symptoms are certainly aggravated. We are, in such cases, to use all the palliative means to remove the spasm, and restore the stream of urine. These means are, local and general bleeding, especially leeches to the anus and cupping the loins. When the pulse is reduced by bleeding, the warm bath, particularly the hip-bath, is useful, or even fomentations, with large glysters of tepid water and oil. After procuring stools, the opiate enema, made with starch or barley decoction, and fifty drops of laudanum, will relieve the grinding pain and irritation. These means may be followed with Dover’s powder and the tepid bath, tepid diluent drinks, and a mixture with laudanum, æther, and liq. potassæ. If these means fail, what are we to do? If the state of the urethra be such as to make the introduction of the catheter improper, the simple bougie may be used; not to draw off the urine, but to bring back the muscles to their natural action.

“The patient should be standing, or resting on his knees, if he is in bed. Take a wax bougie, oil it, soften it, give it the proper curve to pass the turn of the urethra, introduce it into the bladder; now make gentle pressure above the pubes; make the patient exert himself to discharge the urine; sprinkle cold water on his thighs; withdraw the bougie while he continues the effort; and when he has the sensation as if he could pass the urine, withdraw the bougie: altogether, and the urine will probably flow.” 43.

Even if the stricture be such as to prevent the bougie or catheter from reaching the bladder, the patient may often be relieved by pressing gently forward with a small bougie, till the point of it has moulded or wedged itself into the stricture, when the belly is to be gently pressed, and the patient directed to exert himself to pass the urine. To further this object, his hands are to be put into cold water, or the same sprinkled on his thighs, slowly withdrawing the bougie, when the urine will generally follow. If this fails, the small catheter must be tried; and if we are foiled in this also, it is evident that we must puncture the bladder, an operation hereafter to be described.

On the introduction of the catheter Mr. Bell gives most excellent directions, which the young student should have engraven on his memory. The following *caustic* observation on the caustic bougie of this country, and *Sonde conique D'Argent* of our French brethren, is in Mr. Bell's peculiar style.

"It will be admitted that the English surgeons are very bold; and if there be a method which promises to be a shorter road to success, that they will take at all hazards. There is not a young man who does not prefer the caustic to all other means of relieving the bladder; and if it shall be proposed to destroy the stricture at once, by breaking it down, with what avidity does he seize the occasion! hence those iron pokers imported, they say, from France, which ornament the window of my neighbour, Mr. Thomson, and which they call bougies! Advantage was never gained by violence in this class of complaints." 50.

Here Mr. Bell makes many good remarks on affections of the prostate gland, which he divides into two classes:—1st. Those inflammatory affections resulting from irritation of the neighbouring parts, common to all periods of life; and, 2dly. those formidable diseases of the gland, to which the latter stages of our existence render us peculiarly liable.

"The disorders under the *first* head are very frequent, and produce great distress. We frequently follow the progress of a case in this manner: a patient, after a tedious and imperfectly cured attack of gonorrhœa, will occasionally have a copious discharge of purulent matter—occasionally, because the discharge is not as from gonorrhœa; it cannot be squeezed from the urethra: it does not flow regularly: it is not every morning that it is found to cover the linen. There is great irritation about the neck of the bladder, frequent call to make water, sometimes pain in the glans penis. If the bougie should be introduced, it is attended with a burning sensation when passing the neck of the bladder; and when it is withdrawn, much bloody mucus and pus follows. If the prostate gland be examined per anum, it is full, one lobe feels much larger than the other, and

there is an induration and irregular hardness perceptible in the seat of the prostate gland and vesiculæ seminales." 51.

These effects, Mr. Bell thinks, spring from a gonorrhœa of the ducts of the prostate; the inflammation, originally seated in the membrane of the urethra, having spread back to them, the gland itself becoming inflamed, while suppurations are established in the surrounding cellular substance. "It is by thrusting the point of the instrument into the prostate, and opening these bags of matter, that the sudden and copious discharge of pus and bloody mucus follows." This, Mr. B. believes to be one of the evils following gonorrhœa in a scrofulous constitution.

"The cure of this distressing disease is to be accomplished by persevering in all the means of allaying irritation. The bowels must be kept easy and natural. The occasional attack of irritation must be soothed by opiate clysters and suppositories, the warm bath, and by mucilaginous drinks, and by leeches applied occasionally to the anus. Here I have found the injection of the bladder to be of the greatest advantage, and also friction on the part, with ointment introduced through the anus upon the point of the patient's finger." P. 52.

As this state of the neck of the bladder is attended with burning and irritation, and occasionally, with spasm and difficulty of making water, so we must be exceedingly cautious in introducing the catheter, since the ducts of the prostate are enlarged, and the point of the instrument is apt to fall into them, or into the abscesses around.

The scirrhus or enlarged state of the prostate gland, in advanced life, is preceded by much uncomfortable feeling in the pelvis, rectum, and bladder, accompanied by sympathetic pains in the hips, perineum, and pubes. The feces are passed with some difficulty, and the figured stool is flattened. The patient thinks he expels the last drop of urine when there is a pint or more remaining in the bladder, as ascertained by the introduction of the catheter. The gland may be equally or partially enlarged, and some idea of its condition may be formed by an examination per anum. In true disease of the prostate, the patient does not complain so much of pain, at the moment we press the gland, as some time afterward.

It ought to be borne in mind, that any thing lodging in the rectum will closely imitate disorder of the bladder: therefore, the bowels should be moved, and the feces softened by a mild laxative, and a large glyster of tepid water every morning. A pill composed of pil. hyd. ex. conii, and ex. col. comp. will be found useful. The Dover's powder also conduces to allay the inflammatory action. The patient should

be cupped upon the loins, or have leeches to the anus, with the tepid hip-bath, and afterward an opiate glyster or suppository. The catheter must be carefully used to empty the bladder, and tepid water should be injected into this organ to sooth its irritation. The large gum catheter is the best.

The third chapter is equally interesting to the physician and surgeon. It is on pain and irritation of the urinary organs from disorder of the bowels.

“Those sympathetic pains which seem to affect the urinary organs, and which have their real seat in irritation of the rectum, or the other intestines, bring full one half of those patients to the surgeon, who are considered as labouring under stricture of the urethra. How this subject should make no part of those numerous Treatises on Stricture we possess, is very remarkable, unless we are to suppose that experience follows, and does not precede, those publications. It is a fact that ought never to be absent from the surgeon’s consideration, when a patient presents himself, complaining of frequent micturition, pain in the bladder, and pain in the perineum, that these symptoms very frequently depend, neither on stone, nor stricture, nor inflammation, nor any mischief in these parts, but on remote irritation.” 60.

Mr. Bell justly observes, that there is a class of patients, whose complaints are considered imaginary by those medical gentlemen, who are not inaptly said to have “a run of business.” A patient came to Mr. Bell, after having been under four surgeons successively, for the cure of stricture in the urethra. Mr. B. found his chief complaint to be an excessive tenderness in the perineum, embarrassing him while he walked. He had been a fox-hunter, but for a long time past had been unable to mount a horse. The introduction of a bougie showed no obstruction there, nor was there any unusual tenderness in the passage. He was also examined per anum; and it was remarkable, that in putting him into the posture of lithotomy, and while fingering, kneading, and pressing the perineum, he was not sensible of any pain, although, when he rose to walk, his progression was interrupted. Mr. B. was convinced that it was a pain referable to the perineum, but not actually seated there. By attention to the bowels he was relieved, so as to resume his horse exercise. Another patient, whenever by confinement to the house his bowels became torpid, experienced a sensation of pain within the anus, and at the neck of the bladder, immediately after passing fæces. This was quickly followed by a pain, as of a sharp instrument driven from behind along the urethra, and giving the gland repeated darts. To this succeeds an intolerable spasm, with an attempt to pass more water. These symptoms are not relieved till all the parts are bathed with

warm water. By accident this patient discovered that wine, instead of aggravating, mitigated these symptoms. Purgings increased the irritation; but balsam copaiba, which acted as a gentle laxative, soon removed the complaint. Many cases are related of anomalous symptoms and irritations of the urinary organs being relieved and dispersed by acting on the intestinal canal and biliary secretion; for which we must refer to the work itself.

Treatment. "The violent operation of purgatives is to be avoided. The combination of laxatives is better: thus, after emptying the canal, with the oleum ricini and tinctura sennæ, preserve the intestinal surface in activity by combinations of ipecacuanha, pulvis rhei, and pulvis cretæ cum opio; or a combination of the pulvis antimoniæ with the pulvis rhei, and the extractum papaveris albi; or, it may be, that it will suit better to give the electuarius sennæ with sulphur, or sharpened with the addition of jalap and oleum ricini. It may be necessary to combine opium with the oleum ricini, when there is much pain and spasm; or to add hyoscyamus to a pill of soap and extract of colocynth. Superior to all, in some constitutions, is a tea-spoonful or two tea-spoonfuls of the balsam of copaiba taken at night. When, by such means, the canal is disposed to a gentle action, let the morning evacuation be assisted by a large clyster of warm water. Very often, in these conditions of the viscera, there is only something wrong in the diet, and the symptoms will vanish by avoiding what harbours, and is offensive. We shall find it often impossible to restore to the bowels their permanent healthy action, without stirring up the liver to its office. What I have found of most advantage, is a pill at night of three grains of the pil. hydrargyri, and two grains of the compound extract of colocynth; and in the morning, the patient may take a very small portion of neutral salts in solution, so as still to avoid purging, but only gently and regularly to move the intestines, or the carbonate of soda and tartrate of soda in a state of effervescence, with the citric acid." 76.

In the above cases, glysters of warm water, during the paroxysm, are very soothing, and go directly to the seat of irritation. "The glyster of cold water is also advantageous." Anodyne enemata or opiate suppositories will naturally be suggested in the violence of the paroxysm, with regulated diet, air, and exercise.

From the beginning of chap. iv. page 77 to page 294, the subject of stricture, with all its various consequences on the bladder, urethra. &c. is most ably discussed and illustrated by Mr. Bell and Mr. Shaw. This great division of the work embraces such a mass, and such a multiplicity of important subjects and excellent observations, that we found ourselves totally incapable of giving any thing like even a faint idea of

it. It ought to be constantly at hand for reference, in all cases where the urinary organs are engaged. We shall therefore pass it over in toto, and endeavour to give some account of that portion of our author's work which treats "of diseases of the rectum," especially as this subject forms a considerable item of investigation in the present Number of the Journal.*

In this division of the work, as in the former, our author has drawn his principles from the natural and morbid structure of parts, concealing nothing, but disclosing all that he thinks important.

"Nothing tends so effectually to disorder the connexion of the sphincter and levator muscles, in the act of expelling the fæces, as the absorption of the fluids of the rectum, and the lodgement of the hard fæces in the lower part of the intestine. Then it is that the patient may strain ineffectually, for the rectum does not contract, the sphincter does not relax, the levator resists, and the only effect produced is the distention of the veins of the verge of the anus, and the forcing of the upper part of the rectum to descend into the lower and more capacious portion." 299.

The levator and sphincter ani muscles are not antagonists, but coadjutors. Their conjoint operation prevents prolapsus of the gut in the act of discharging fæces; one contracting around the extremity of the gut, the other drawing it up and sustaining it.

"But if any peculiar irritation takes place within the rectum, by which the relaxation of these muscles is excited, they lose their guardian office, and let the inner membrane of the rectum descend, and permit the veins of the anus to be distended." 300.

1. *Warts within the verge of the Anus.* This disease is sometimes mistaken for cancer, and leads to negligent or too severe practice. The patient complains of continual irritation and discharge from the anus, with difficult evacuation of the fæces, which have a ragged appearance from passing through the irregular orifice. The introduction of the finger into the anus is difficult, and draws blood; there is a certain degree of stricture at the orifice; the surface is felt hard and rough, owing to the existence of warty excrescences. These should be snipped off with probe-pointed scissors, the remaining lesser ones being touched with caustic, or washed by means of a small sponge attached to a probe, with the diluted acetic acid. The rectum bougie is to be used. This

* See our Review of Mr. White's work in this Number.

disease, like most others of the rectum, will be found to have a connexion with deranged action of the bowels.

2. Stricture of the Orifice of the Rectum. This is by no means an uncommon complaint. It is known by the distress and pain on going to stool, by the occasional retention of the fæces, and by the form of them.

"On inspection, it is ascertained by a distinct ring prominent around the orifice, and to be felt by the finger pressed against the perineum ; by the difficulty of introducing the finger, and by the unusual pain which the attempt creates.

"This stricture is occasioned by inflammation, repeatedly produced, though in a slight degree. Its cause, for the most part, is costiveness and straining, by which the fibres are strained and burst. Sometimes, I believe, it may come from tenesmus, and frequent excitement of the orifice by painful and ineffectual calls to evacuations." 303.

Stricture of the orifice, with piles, is a still more common occurrence. Thus, if a person is irregular in the time of his evacuations, and the propulsion of the fæces be attended with straining and pain ; and this state continue long, a stricture of the anus is a pretty sure consequence. Mr. Bell justly remarks, however, "that through the whole length of the intestinal canal, there is a connexion betwixt the state of secretion from the inner surface, and the state of contraction of the muscular coat of the intestine."

"The cure of the stricture of the anus is to be accomplished, 1. By leeching and fomentation, to subdue the existing inflammation ; 2. by correcting that state of irregularity of the bowels, which has been the original cause ; 3. by the use of clysters ; 4. by the introduction of the rectum bougie.

"Patients in this country, will object to the use of the *lavement*. Then let them attend to their diet, and study regularity in their evacuations ; but if, by neglect of these matters, a disease of the rectum or anus comes on, there is nothing more conducive to ease and rapid recovery, than the proper use of clysters." 305.

Mr. Bell thinks there are few diseases of the anus and rectum that will not yield to the proper use of the rectum bougie. For common cases Mr. Bell prefers the metallic bougies. For a stricture of the rectum, some way within the orifice, and attended with spasm and pain, the common bougie produces distressing symptoms. A simple tent of rolled linen is more beneficial.

"Take a piece of linen of square form, roll it up in the form of a bougie, then tie a cord or strong thread very firmly around one end of it. A probe is now to be passed up in the inside of the roll of linen, until its point is stopped by the tying. Where the cloth projects beyond the ligature, it is to be cut and rounded, so as to

offer no obstruction when introduced into the rectum. The tent thus formed, is to be dipped in liniment or oil ; and is ready for use. The probe gives it stiffness, so as to enable us to pass it through the stricture ; and the probe being withdrawn, the tent lies soft and pliant in the rectum." 307.

Here Mr. Bell recommends a dilatation of the parts by the introduction of a gut, six or eight inches long, into the rectum, and afterward slowly distended with fluid by means of a syringe. This is similar in principle to Mr. Arnott's dilator, which we have lately found very useful in a stricture of the rectum. The bougie or dilator should be used in the morning, while the patient is still in bed ; and the size, at first, should be only such as may put the parts gently on the stretch ; but no violence should ever be used. If the patient can bear the instrument, it may be allowed to remain twenty minutes. Sometimes, without the patient's feeling pain, the bougie may be distending the stricture too rapidly, and doing much mischief. In these cases, a shivering and sickness follow, in a few hours. "It is possible to bring on inflammation of the peritoneum and death by this kind of violence."

"Let the patient be placed on his knees in bed ; the bougie is warmed and oiled, though a mild liniment or ointment is better. It is at first introduced perpendicular to the orifice ; but when about an inch within the anus, it is to be directed upward, that is, towards the sacrum : if it be far introduced, the direction must be again varied, otherwise the point will hit the promontory of the sacrum ; and often this resistance of the bone has been mistaken for stricture." 309.

Mr. Bell introduces here some important observations on sounding the rectum. Obstructions may take place in this gut from various causes ; from simple stricture, hardened fæces, the falling down of a turn of the colon, a tumour, as of the ovary, or a retroversion of the womb. The history of the case should always be minutely inquired into, before a bougie be used. Mr. Bell was called to a lady who had been three years under the use of the bougie. Mr. B. "found that the obstruction to the rectum arose from the fundus of the uterus having fallen into the hollow of the sacrum." Against this had the bougie been pushed for years, fortunately without any other bad consequence than the expensive attendance of a surgeon. In the introduction of instruments into the rectum, beyond the reach of the finger, attention to the curve and form of the canal is particularly necessary ; otherwise, the extremity of the instrument will be driven against the bladder, or against the sacrum.

3. *Stricture of the Rectum.* This our author considers to

be owing to a morbid change in the inner membrane of the intestine. "Not unfrequently the inner edge of the deeper sphincter ani is the seat of this stricture; and then the finger enters only to the depth of the second joint, when it is obstructed by a sort of membrane standing across the passage." The symptoms of stricture are sometimes very obscure, and arrive at a great height before they are noticed by either patient or practitioner.

"Without any definite notion of the nature of the disease, the patient is, nevertheless, sensible that there is something wrong. He has spasms of the gut; he has pain of the loins, sometimes of the hips and thighs; he is distressed with flatulence and eructation; he is sensible of something obstructing the freedom of evacuation; he says his *feces* are like those of a child, small and flattened, or irregularly figured. He strains much, and hence piles are often combined with stricture of the rectum, as with stricture of the urethra. The state of the bowels is altogether irregular; and not unfrequently, there is purging alternating with constipation." 312.

But there is more than this, in the condition of a patient with a narrow stricture. The obstruction to the regular discharge of *feces* produces a gradual accumulation in the bowels, with prominence of the abdomen, borborigmi, and great distress. The patient now takes opening medicines, the *feces* are softened, large quantities are discharged, and the patient, after extreme debility, feels himself relieved for a time, till a gradual, and at length enormous accumulation takes place in the intestines. The mind and body are again oppressed; there is faintness and lowness; the breathing is laborious; the flatus distressing; the face is pale, and characteristic of suffering; the pulse is feeble, and sometimes intermits; there is hiccough, and all the symptoms of ileus. The action of the muscles at the neck of the bladder is drawn into disorder, and the urine is retained. This, which may be denominated simple stricture, is, Mr. Bell thinks, the consequence of inflammation in the gut, excited by frequent ineffectual efforts to propel the *feces* in the constipated state of the bowels.

"The spincter in this condition does not relax, nor does the intestine itself act. The whole propelling power is in the abdominal muscles. The rectum, urged down by the pressure from above, forms a fold of the inner coat, just above the inner sphincter. By repetition, inflammation and adhesion of the outer sides of the fold take place; and by these means losing its softness and yielding nature, it becomes a permanent septum, standing nearly across the gut. It will be removed with difficulty, in proportion to the time that has elapsed from its formation." 314.

The means of cure recommended by our author are, proper

laxatives regularly taken, the use of glysters to prevent the lodgement of fæces above the stricture, and the daily introduction of the bougie or tent. The division of the stricture with the knife should not be thought of till other means have failed; and when done, it requires the use of the bougie to perfect the cure.

“To cut the stricture, we take the probe-pointed bistoury, used for hernia, which has a cutting edge, of only about half an inch in length, near its extremity. Having introduced the tip of the finger into the stricture, so as to feel the firm edge distinctly, the knife is laid with its flat side upon the finger, and pushed along under its guidance, until the end enters the stricture. The cutting edge of the knife is then to be turned round, so as to present the edge to the stricture; and it is to be urged against the stricture by the finger in ano. The cut being made on the edge of the stricture in one direction, it is better to turn the knife flat upon the finger, and then to move both the finger and knife round to some other part of the edge of the stricture, which stands most distinct and prominent; and thus to notch the membrane in several places. This will be more effectual, and attended with less hazard, than one deep cut.” 315.

The *scirrhus* contraction of the rectum is an incurable disease. It begins with a hard tumour, smooth towards the cavity of the gut, attended by shooting pain or constant uneasiness, and difficulty of passing the fæces. In a few weeks the tumour becomes irregular, occupying one side of the gut, but gradually spreading all around it. The finger cannot now be introduced; the evacuations are much obstructed, and attended with burning pain; the patient cannot sit, and the spasmodic retraction of the anus, over which he has no control, gives him insufferable pain. Lodgements of indigestible substances above the stricture are now apt to induce inflammation and abscess. Here, while relating a most interesting case of this deplorable malady, Mr. Bell takes occasion to remind his readers that indigestible matters, as hard bones, may pass through the whole line of canal, until they are retained by the sphincter ani, where they fix themselves, irritating and penetrating the coats of the intestines, and causing great alarm of a cancerous disease.

When a cancerous affection is ascertained, our hopes must rest on soothing the general irritability, and preserving the diseased parts as quiet as possible. A gentle laxative may be joined with cicuta, or the castor oil in conjunction with laudanum, or extract of hyoscyamus with extract. col. comp. and after every motion a tepid glyster should be thrown up. The rectum should be kept free for the passage of fæces, by means of the tent; and if there be excessive irritation from the fæces coming in contact with the ulcerated surface of the

gut, the elastic tube must be used to draw them off. Leeches, fomentations, and opiate glysters, will be occasionally required.

4. *Prolapsus ani* is generally a consequence of irritation in the rectum, and not of relaxation. It is frequent in children, from the nestling of ascarides in the gut. The irritation of these worms produces a perpetual nismus in the intestine, until it at last acts upon itself, and the inner membrane is protruded. It swells, congestion takes place in the parts, and the intestine is pushed further and further out. A long-continued use of irritating purges will produce the same effect in children, and even in adults.

“To reduce the prolapsus, we must order fomentation to the protruded parts: after this, we undertake a general and gradual compression of the protruded gut. When the bulk is diminished, we then attempt to reduce the gut, and place it within the anus. In children, it is difficult to reduce the last turns, if the finger is pushed through the orifice; for when it is again withdrawn, the gut slips down. We may, therefore, twist a piece of stiff paper into the form of a cone, soften the point by wetting it, and oil the surface of the paper: placing this upon the point of the finger, with it we may push the last portion of the gut within the anus; the cone will slip out easily, without bringing down the gut with it.” 326.

The cause, however, still remains to be removed—the irritation and tenesmus. If worms are the cause, bitter infusions or lime-water should be thrown up. Other sources of irritation must be sought for, in some cases, and the cure will be assisted by injection of starch and laudanum; and by washing the parts with an infusion of galls and opium, when they are protruded. The child should not be permitted to strain, nor to take the usual position at stool. He should be kept in the erect posture, and the hips should be held together, so as to compress and support the gut.

Chronic Prolapsus. This is quite a different disease from the one just described. It is a protrusion of the inner fold of the rectum, the consequence of long-continued or habitual costiveness. When the torpor of the bowels has continued a long time, the protruded fold of the rectum becomes elongated, and assumes the form of a tumour, when inflamed and turgid; but of a shrivelled membrane, when not swollen and inflamed. In its ordinary condition, it presents two distinct membranous folds, one hanging from each side of the anus. Piles are often excited by, and added to this disease. “It is now that we, with propriety, cut off these pendulous flaps of skin.”

“I have done this operation by taking hold of one of the flaps

with my finger and thumb, and passing the needle through it near its base, then cutting the ligature so as to make two : these being tied, one on each side of the flap, the projecting part is snipped off with the curved scissors. The ligature and remaining part of the flap are left to be withdrawn within the gut. A starch clyster, with laudanum, should be given in the evening, and the patient must keep to his bed or sofa for several days." 328.

5. *Hæmorrhoids.* Mr. Bell and Mr. Shaw make many judicious observations on hæmorrhoids, as we know from painful personal experience. Mr. Bell most wisely views piles as something more than a mere tumefaction of the hæmorrhoidal vessels, or inner membrane of the rectum. Irregularity of action in the small or great intestines will cause piles, but disordered secretion in the liver is most commonly the cause. As preventives, therefore, we have found nothing so effectual as the quicksilver pill and ipecacuanha, with the use of injections, so as to bring off the fæces without irritation. The introduction of the rectum bougie we have lately found very useful ; and we have thought that the action of the bougie on the mucous membrane of the rectum has, in our own case at least, produced an increased action or secretion throughout the whole line of the alimentary canal, with an improved digestion. But this observation rests only on personal feelings in a solitary instance, and wants confirmation.

Mr. Bell cautions his reader, 1st. against including the fine skin at the margin of the anus in his ligature, when he proceeds to extirpate a pile. 2d. Never to leave the tumour strangulated by the ligature, and liable, by more distention, to draw in the surrounding skin. 3d. When he has drawn the ligature, to cut off all the convexity of the tumour with scissors. 4th. To avoid operating on a tumour which is broad and tense at its base. The following is Mr. Bell's mode of operating on hæmorrhoidal tumours.

"The patient resting on his knees, the assistant holds aside the nates. The surgeon taking hold of the tumour betwixt his finger and thumb, draws it down so as to expose the base of it. Now let him pass the harelip pin across the base of the tumour ; take off the steel point from the silver pin. Over the pin, and consequently fully over the tumour, he is now to throw his ligature. He is to draw it as much as the patient can bear without excessive pain. With one motion of the long-curved scissors he is to remove the tumour, which is thus included in the ligature." 336.

Mr. B.'s object, in the first part of the operation, is to restrain the bleeding, and to keep the membranes in contact, that they may adhere and be consolidated. On the succeeding morning, in the evening of the day of operation, the

pin may be withdrawn, if there be tension and pain of the part, for then its purpose is served. But in general, the pin and the ligature may be permitted to remain until the parts go through the whole process of inflammation.

6. *Fistula in Ano.* This is a consequence of inflammation and suppuration by the side of the lower part of the rectum. But these are of different kinds, and require discrimination. One is a superficial phlegmonous boil in the skin, near the anus, from cutaneous irritation. In another person of bad constitution, an abscess will take place in the loose cellular membrane at the side of the gut, ushered in by fever and restlessness, and exhibiting a dusky red inflammation, or perhaps a purplish colour, without much phlegmonous swelling. A bad suppuration follows, and the thin cellular membrane soon becomes sloughy. In a third person, particularly in advanced age, and broken constitution, a kind of carbuncle takes place, and degenerates into a fistula. In a fourth, the true chronic abscess will appear by the side of the anus, having a remote source. It appears, and becomes prominent without pain, or tension, or inflammation of the part, and is a mere consequence of the infiltration and gravitation of pus, from a disease high in the spine, perhaps of the nature of psoas abscess. Fifthly, in consumptive and scrofulous habits, abscesses will form by the side of the anus, upon very slight local irritation, and become in the end, if not from their commencement, constitutional. Here Mr. Bell draws the attention of his brethren to abscess formed by the side of the rectum, from irritation, or disease within the passage, a circumstance rarely noticed by surgical writers. Yet many analogies would lead us to think that there was nothing extraordinary in this. We have abscess external to the fauces, from inflammation of the inner membrane of the throat—abscess by the side of the lacrymal duct, and by the side of the urethra, in the perineum, from irritation and inflammation existing within these tubes. In fact, “we must consider that the cellular membrane is many degrees more disposed to the formation of abscess than any other texture; and as an inflamed gland, itself free from suppurative action, will yet produce pus in the surrounding cellular membrane, so the extremity of the rectum, without being properly the seat of suppuration, will yet cause it in the loose texture which is around it.”

This view leads to a practical principle. Besides the usual remedies for bringing a suppuration to a successful issue, we must keep our attention on the state of the gut. If there be

piles, warts, strictures, tenesmus, irritation, or discharge, they must be removed; for they have produced the abscess, and will cause its continuance. An abscess thus generated, is like a wound with a foreign matter in it. It becomes a sinus—its sides are consolidated—it discharges a thin fluid, and has no disposition to heal. At last the gut ulcerates, feculent matter gets into the sinus, and true fistula is completed.

Mr. Bell lays down concise, yet clear and judicious, directions for operations necessary in cases of fistulæ in ano, but they do not differ materially from what are stated in our best systematic works of surgery.

The work closes with an Appendix, containing the description of the preparations which are in the fourteenth division of the Museum in Windmill-street; and exhibits a vast mass of important pathological specimens, well worthy the attention of students, and all visitors who can get access to this invaluable collection.

Our readers will perceive that our analysis only embraces the two wings of the work under Review. The middle, and great body of the publication, on stricture, its consequences, and concomitants, being passed over, at least for the present, as not within the grasp of even a very extended article. From the specimens of valuable matter which we have exhibited in this analysis, our readers will easily form an estimate of the work, which we most earnestly recommend to the attentive perusal not only of the surgeon and general practitioner, but of the physician. One great charm of Mr. Bell's writings consists in his very ingenious physiological and pathological elucidations of disease, equally interesting to the medical and chirurgical practitioner. Another is the force with which he impresses all important practical principles on the attention, and consequently on the memory of his readers or auditors. A third, is the air of simplicity and perspicuity which he manages to throw over the most intricate and difficult subjects, by which the student is encouraged to proceed in his investigations, instead of being checked and embarrassed by awkward and unsatisfactory attempts at the explanation of natural and morbid phenomena. These are great gifts, and indications of great talent. They are not entirely free from alloy. Mr. Bell does not pay much attention to composition and arrangement. Yet we think that these, however inferior in themselves, would add not a little to the value, as well as the lustre of Mr. Bell's publications. We may again state, that Mr. Shaw's notes and illustrations are exceedingly creditable to the professional zeal and acquirements of this deserving young surgeon.

IX.

Principles of Military Surgery, comprising Observations on the Arrangement, Police, and Practice of Hospitals; and on the History, Treatment, and Anomalies of Variola and Syphilis. Illustrated with Cases, Dissections, and Engravings. By JOHN HENNEN. M. D. F. R. S. E. Deputy Inspector of Military Hospitals. Second Edition, with numerous Additions. One volume Octavo, closely printed, pp. 580, with six Plates. London and Edinburgh, 1820.

In the Monthly Series of this Journal, we gave a full account of the first edition of the valuable work now before us. In this edition, the quantum of matter is nearly doubled, by means of concentration and small type, while the price is but little increased. As it now stands, there is no other work on Military Surgery, in the English Language, at all to be compared with Dr. Hennen's volume. This distinguished medical officer has added to an extensive stock of personal experience and observation, a vast mass of important facts and observations from his military, naval, and civil brethren, combined with a selection from the best authors of our own and other times, all bearing on military surgery in particular: but, in truth, embracing surgery in general, and elucidating all its leading principles and operations. Such a work must prove an invaluable acquisition to the practitioners in the army and navy; and, indeed, to surgeons in general, to whom we can safely recommend it as a standard production.

In the present article, we shall confine ourselves to the subject of syphilis—a subject which so much divides the sentiments of professional men, and on which Dr. Hennen, from his official situation, and his access to authentic documents, is particularly well qualified to write. Our own experience in the non-mercurial treatment of syphilis having been very limited, we shall endeavour chiefly to exhibit a full analytical view of our able author's paper, leaving it to our readers to judge and act for themselves, after weighing the evidence here adduced.

Dr. Hennen enters into a pretty extensive historical sketch of the various other remedies besides mercury, which have been extolled, from time to time, as specifics. This, he thinks, can only be accounted for, by supposing that the disease was curable by the efforts of the constitution alone; otherwise, inert and trifling medicines could never have acquired the reputation of being anti-syphilitics. But there is another point of view, in which the subject may be taken,

and in this we are strongly disposed to coincide with Dr. Hennen.

"It may be, that such an alteration has been produced in it either from the effects of remedies, or by natural causes, as seriously to influence the results of our treatment at the present day. The analogy of leprosy and of scurvy, which at one time raged throughout Europe, but are now almost unknown, is strongly in favour of the supposition of a change of character in syphilis; we have also direct testimony, which shows that its symptoms have become milder and more tractable." 496.

Dr. H. quotes several authorities for this supposition; among others, the learned and indefatigable Astruc himself, who, nearly a hundred years ago, says—

"I have, by careful and repeated observation, found the venereal disease daily to grow milder; it may, perhaps, be more frequently contracted than formerly, yet its rage is less violent, its symptoms are not so many, so painful, nor so difficult to be cured; it yields more readily to remedies properly applied; and, in a word, seems by little and little to approach towards its close."*

"The following note, containing very curious matter, we shall extract from Dr. Hennen's work.

"From some extracts from the rare volume of Ruy Diaz de Isla, *"Contra las Bubas,"* Salamanca, 155—, with which Dr. Thomson, professor of Military Surgery, has favoured me, I find that, in no town in Europe, of one hundred inhabitants, were there fewer deaths than ten on the first appearance of syphilis among them. Now, if we recollect that the numerous monks and nuns spread the disease through all classes of society, it is not an extravagant calculation, that fifty out of the hundred were poxed. This will give us one death in five: the remaining four survivors must have owed their lives to the "methodical or rational" cure. I doubt whether the mortality was greatly less than this while the gross abuses of mercury prevailed, under the form of daubings, with four lb. of quicksilver to two lb. of lard, applied over the whole body. *"Cum quo (says Torella) infinitos interfecerunt, interficiuntur homines, non moriuntur."* (Luisin, tom. i. p. 528.) But, putting the mortality out of the question, Hutten expressly states, that hardly one in one hundred was perfectly cured, the disease returning upon them again, as it did on himself after eleven salivations. (See *Ulrichus de Hutten de Morbo Gallico apud Luisinum*, cap. 4. tom. i. p. 281 and 283;) but after guaiacum was introduced, only one individual died in Germany while under its use, and his death was attributed to excess in venery." 498.

If the latter part of the above passage be true, (which we

* Astruc, lib. 1, cap. 18. Hennen, p. 497.

much doubt) then guaiacum, as well as syphilis, has lost some of its pristine powers.

Speaking of the opinion entertained by several of the present day, and once prevalent all over Germany, that the diseased state of the bones, in protracted syphilitic cases, is the effect of mercury, and not of the venereal virus, Dr. Hennen remarks,

“It becomes a point well worthy of inquiry, whether mercury produces diseases of the bones where a predisposition to these diseases does not exist. I am well convinced that the carious affections of the bones, which are so common in persons treated by long mercurial courses, have proceeded, not from the disease, but from the remedy rapidly and irregularly thrown in while periostitis existed; as a proof of which, I have not seen a single case of carious bone in the military hospitals since the non-mercurial treatment was adopted, except where mercury had formerly been used, so that those gentlemen who so kindly and compassionately harangued on falling noses and rotten bones, have displayed their sensibility in vain.” 500.

Upon this we can only remark, that as we have seen mercury used to a great extent, and among whole masses of men of various constitutions, without these diseases of the bones supervening, we cannot but suspect that the syphilitic virus is the principal cause of such formidable affections.

The observation of Leo Africanus, nearly three hundred years ago, that lues venerea undergoes a cure by change of climate in Africa, without the employment of mercury or other medicine, is confirmed, Dr. H. thinks, by the recent traveller, Horneman; but we confess, that the extract brought forward from this gentlemen, has nothing very satisfactory for our minds.

“Dr. Mitchell, of New-York, in the Medical Repository for 1799, assures us, that a great number of venereal ulcers were cured in the hospitals of that city, by the local application of potash, or salt of tartar, from which fact he draws the very natural conclusion, that neither nitrous acid nor mercury produced any *specific* effect upon these ulcers.” 508.

Our author, after enumerating the various morbid affections produced by mercury, when either profusely used, or in unfavourable constitutions, observes;—

“While I have thus enumerated many of the ill effects produced by mercury when it acts as a poison, I must give my strongest testimony to the admirable results which proceed from its judicious use in persons not constitutionally disposed to be injured by it, and who do not lead profligate lives, or are not exposed to the foul air of hospitals fully saturated with its fumes.” 512.—“Of its unquestionable efficacy there can be no doubt; but its indiscriminate employment in every case, whether old or recent, suspicious or confirmed,

and without any view to the patient's diet, or his general health, has produced the most dreadful consequences." 513.

This, indeed, we have all along considered to be the real state of the case. The *abuse* of the medicine is to be deprecated; not its rational use. Dr. H properly observes, that the precepts of Hunter, Abernethy, Pearson, Carmichael, and several others, have reduced the quantity of mercury formerly given in syphilitic affections.

"But it remained for the inquiry which is at present prosecuting in the military hospitals, to show, that even these bounds are too extensive, and that the practitioner has, in a vast number of instances, the option whether to defer its use, to limit it, or to omit it altogether. Settled as it now is, beyond a doubt, that syphilis does not run on uninterruptedly to a fatal event, if not checked by mercury, that practitioner cannot be admitted to do full justice to his patient, who does not avail himself of the fact—to his own judgment must be left the extent to which he may be pleased to do so."

Dr. Hennen candidly confesses his inability to point out "any invariable characteristic symptom by which to discriminate the real nature of the primary sore," while "we are equally at a loss in many of the secondary symptoms."

"It would be by no means difficult to show, that the high round edge, the scooped or excavated sore, the preceding pimple, the loss of substance, the hardened base and edge, whether circumscribed or diffused, and the tenaciously adhesive discharge of a very fetid odour, are all observable in certain states and varieties of sores unconnected with a venereal origin. The hardened edge and base, particularly, can be produced artificially, by the application of escharotics to the glans or penis of a sound person; and if any ulceration or warty excrescence previously exists on these parts, this effect is still more easily produced." 517.

What, then, are the practical steps to pursue in diseases produced by sexual intercourse? We shall lay the precepts of our able and experienced author before the reader.

"1st. In every primary ulcer, I would give up the idea of using mercury at first, treating it as if it were a simple ulceration, by cleanliness, rest, and abstinence, and applying to it the most simple and mildest dressings.* If the sore did not put on a healing appearance in a reasonable time, the extent of which must depend on the circumstances of the patient, I should make use of more active dressings. But if, beyond all calculation, it remained open, I should certainly not sacrifice every consideration to a dislike of mer-

* A very early application of lunar caustic will often supersede all other remedies.

cure, knowing how many persons have been seriously benefited by a judicious and mild administration of that remedy. 2d. The same principles which guide me in the primary ulcers, would have the same, if not greater force, in the case of buboes. In their irritable state I consider mercury as altogether inadmissible. Moderate pressure, and cold applications, will often disperse them in their commencement, aided by Girtanner's plan of frictions of volatile liniment on the thigh of the affected side. If they suppurate, opening with the *kali purum* is by far the best plan; they then heal from the bottom. 3d. The cutaneous eruption I would treat at first on the same general principle, but I should not very long postpone the employment of the mildest mercurial alteratives, aided by warm bathing and sudorifics. 4th. In the affections of the throat I would be more guarded than in any others in the employment of mercury until all inflammatory disposition was removed; after that I have seen them yield, as if by magic, so soon as the local effects of the mercury on the parts within the mouth became obvious; but before the inflammatory symptoms were subdued, I have seen a vast number of instances where irremediable mischief has been done. 5th. In the bone cases, during the stage of periostitis, or any approach towards it, local bleeding, blistering, warm bathing, and abstinence, are the proper remedies, to the entire exclusion of mercury. When inflammation is subdued, that remedy may be tried in moderation; but if caries exist, I hold it to be highly improper under any form." 519.

Our author states, that so far has delay been from injurious. in the cases under his inspection, that the sanative powers of mercury were remarkably assisted by the preparatory regimen of cleanliness, rest, rigid abstinence, purgatives, sudorifics, and venesection, where deemed necessary. This was particularly remarkable where the genital ulcerations were irritable and extensive, threatening the destruction of the organ; or where the throat was severely affected. The extent of the delay in administering mercury, must depend on the individual case. In delicate phthisical habits there is no necessity for haste.

"At the same time, no person in private practice, whose constitution could tolerate mercury, would willingly continue to bear about his person those suspicious-looking stains and eruptions on the skin, which a judicious employment of that remedy so often relieves." 519.

While, therefore, great pains were taken to ascertain how far mercury could be safely dispensed with in the treatment of syphilis, no patient's constitution was involved, nor practitioner's character compromised in the experiment.

"In no case, (says Dr. Hennen) I most firmly believe, has the health of an individual been wantonly trifled with, nor has the ut-

most professional exertion been spared to elucidate the history of this most interesting and most common of all military diseases, even in the persons of some of the professional men themselves."

This, we have the strongest reason to believe, is strictly fact. That any *external* applications of mercury could have had any constitutional effect on the disease, is quite untenable; indeed, cold water alone was used by a great many of our military surgeons. It is well known that the appearance of genital ulcerations is much modified by their locality. This should be always borne in mind. The following circumstances were generally remarked in the military hospitals.

"1. Ulcers on the external integuments have generally had round callous edges, level surfaces, but little induration of base; they were less irritable than others, became sooner clean, and healed uniformly, but slowly. 2d. Ulcers on the internal membrane of the prepuce have been generally either superficial or elevated; their surfaces covered with a light-coloured slough, or of a bright red, with a villous appearance; their edges either regularly defined, or spread out like excoriations; their bases have been, in general, but little indurated, but when the ulcers have spread out, they have sometimes acquired a cartilaginous hardness, and have been extremely difficult to heal. 3d. Ulcers immediately behind the corona glandis have been, in general, highly irritable, deep, scooped, indurated in their edges and base, foul, with membranous bridges, running across them, throwing off a perceptible slough, but, if mildly treated, soon healing after that event. 4th. Ulcers on the frænum have generally followed lacerations of that part, have had considerable induration of base, and have been generally slow of healing. 5th. Ulcers of the glans have been generally excavated, but with little hardness of base, quickly throwing off a slough, and healing rapidly." 524.

Dr. Hennen mentions a curious fact, which should be held in memory, especially by the military and naval surgeon. It is this—that the hardened edge and base *naturally* attending some ulcerations "may be artificially produced by the application of the kali purum to a sound man;" and this sore "is not to be distinguished from chancre by a person not acquainted with the circumstance." Even the specific distance (as it has been called) of the hardness can be increased or diminished, by proper management of the caustic.

Dr. Hennen finally comes to the conclusion, that primary sores on the genitals, of whatever description they may be, can be healed without the employment of mercury; nor has he met with any thing to make him question the propriety of making the trial. The same observation, to a certain extent, is applicable to the secondary symptoms that have succeeded the non-mercurial treatment; but here our author cannot

offer such positive testimony to the expediency of abstaining from mercury altogether.

"The facts at present ascertained are these :—Secondary symptoms occur more frequently, and appear at an earlier and more determinate period than when mercury had been used ; but they, in many cases, have gone off as soon, never, as has been supposed, proceeding from bad to worse, or from one succession of parts to another in unabated violence ; on the contrary, they by no means exhibit the same violent and unrelenting symptoms which we have observed, in many instances, where mercury has been used ; the eruptions have not run into ulceration ; they have not formed into large scales or extensive blotches ; nor have the bones of the nose, or of other parts, been in any instance affected with caries. I cannot take upon me to assert, that these events *will not* occasionally take place, but in the numerous cases which I have watched with the utmost anxiety, I can aver that they *have not*." 527.

Eruptions on the skin, Dr. Hennen thinks, have been more frequent since the non-mercurial treatment has been in use ; but the general health did not appear to suffer more than when similar eruptions succeed the mercurial treatment, and they all gradually, though sometimes slowly, disappeared without the use of mercury. In some cases of the cutaneous eruptions, Dr. H. observed considerable benefit from the mineral acids, used both internally and externally. In no case were the bones of the nose affected, though occasional instances of periostitis, and of pains and swellings of the bones of the cranium, and of the extremities, were met with. Only two *unequivocally syphilitic* nodes were observed. One of these gave way to blisters and sarsaparilla ; the other was treated with mercury.

We shall now introduce a series of analytical tables, drawn by our most intelligent and indefatigable author, from the practice of the regimental surgeons, in those corps of the army which were quartered in Scotland, during a considerable portion of the time that he held the superintendence of that part of the united kingdom.

Analytical Return of Venereal Diseases, treated without Mercury, in the Military Hospitals of Scotland, under the Superintendence of JOHN HENNEN, M. D. Deputy-Inspector, from June 20th, 1817, to December 20th, 1819.

PRIMARY AFFECTIONS.

1. Description of Cases that have been Treated.

A. Affections possessing the true Hunterian character.	a. Ulcers only		109
	b. Buboës succeeding to ulcers.	a. Before admission into hospital	48
		β. After admission into hospital	10
		γ. Of which were discussed	42
		δ. Of which suppurated	15
		ε. Under cure at the date of last return	1
			58
B. Affections of various kinds not possessing the true Hunterian character.	a. Ulcers only		154
	b. Buboës succeeding to ulcer.	a. Before admission into hospital	72
		β. After admission into hospital	12
		γ. Of which were discussed	53
		δ. Of which suppurated	31
	c. Buboës without previous ulcer		2
			84
			2
			240
Total number of Primary Affections treated			407

2. Time required for the Cure.

A. OF ULCERS.

Hunterian.		Non-Hunterian.	
The following number of cases were cured.	In the following number of days.	The following number of cases were cured.	In the following number of days.
36	From 5 to 10	63	From 3 to 10
19	11 20	40	11 20
42	21 30	43	21 30
13	31 40	10	31 40
13	41 50	5	41 50
5	51 60	1	51 60
1	71 80	1	61 70
2	91 98	2	71 80
4 under cure at the date of last return.		4	81 90
		1	93
		1	109
		1	113
		18 under cure at date of last ret.	

B. OF BUBOES ENDING IN RESOLUTION.

Buboes following Hunterian Ulcers.		Following Non-Hunterian Ulcers.	
The following number of cases were cured.	In the following number of days.	The following number of cases were cured.	In the following number of days.
5	From 5 to 10	10	From 2 to 10
8	11 20	18	11 20
15	21 30	13	21 30
4	31 40	4	31 40
8	41 50	4	41 46
2 under cure at the date of last return.		4 under cure at the date of last return.	

C. OF BUBOES ENDING IN SUPPURATION.

Buboes following Hunterian Ulcers.		Buboes following Non-Hunterian Ulcers.	
The following number of cases were cured.	In the following number of days.	The following number of cases were cured.	In the following number of days.
2	From 30 to 40	1	From 7 to 10
3	41 50	2	11 20
2	51 60	5	21 30
2	61 70	3	31 40
1	77	4	41 50
1	92	3	51 60
4 under cure at the date of last return.		1	71 80
		3	91 100
		2	101 110
		2	111 113
		1	179
		4 under cure at the date of last return.	

Note. In the table A of Ulcers, the period of cure of some of these affections is not specified, as it was not fully ascertained from some corps; but in no case did it extend beyond the average period of the cases which are specified in the Table.

SECONDARY AFFECTIONS.

1. Description of Cases treated.

A. Succeeding the Hunterian ulcer.	a. Eruptions only.	a. Tubercular	6	15
		β. Exanthematous	5	
		γ. Pustular	2	
		δ. Tubercular and Scaly	1	
		ε. Tubercular and Vesicular	1	
	b. Eruptions combined with sore throat.	a. Tubercular	2	4
		β. Tubercular and Scaly	1	
		γ. Tubercular and Exanthematous	1	
	c. Tubercular Eruption combined with Iritis			1
	d. Tubercular and Papular Eruption, combined with Iritis, Periostitis, and Sore Throat			1
e. Tubercular and Exanthematous Eruption, combined with Periostitis			1	
f. Sore Throat only			1	
g. Exostosis only			1	
				24
B. Succeeding ulcers not Hunterian.	a. Eruptions only.	a. Pustular	6	12
		β. Exanthematous	3	
		γ. Tubercular	2	
		δ. Tubercular and Scaly	1	
	b. Eruptions combined with sore throat.	a. Exanthematous	8	7
		β. Tubercular	2	
		γ. Papular, Scaly, and Tubercular	1	
		δ. Pustular and Tubercular	1	
	c. Sore throat only			3
Total number of Secondary Affections treated				46

II. Period of Occurrence, and Time required for the Cure.

Description of Primary Affection to which they succeeded.	No. of Cases.	Description of Secondary Affection.	Period of occurrence after Primary affection.	Time required for the Cure.
A. Succeeding the Hunterian Ulcer.	6	Tubercular Eruption . . .	From 7 ds to 6 ms	From 10 to 60 ds
	6	Exanthematous Eruption . .	— 28 ds to 6 ms	— 3 to 42 ds
	2	Pustular Eruption . . .	— 21 ds to 38 ds	— 18 to 43 ds
	1	Tubercular and Scaly Eruption	40 ds	25 ds
	1	Tubercular and Vesicular Eruption	22 weeks	27 ds
	2	Tubercular Eruption with Sore Throat	— 46 to 75 ds	— 31 to 240 ds
	1	Tubercular and Scaly Eruption with Sore Throat	5 weeks	66 ds
	1	Tubercular and Exanthematous Eruption with Sore Throat	2 ms	60 ds
	1	Tubercular Eruption combined with Iritis . . .	14 weeks	45 ds
	1	Tubercular and Papular Eruption, combined with Iritis, Periostitis, and Sore Throat	45 ds	84 ds
	1	Tubercular and Exanthematous Eruption, combined with Periostitis . . .	5 ms	28 ds
	1	Sore Throat only . . .	5 weeks	33 ds
	1	Exostosis only . . .	74 ds	14 ms
B. Succeeding Ulcers not Hunterian.	6	5 Pustular Eruption . . .	From 49 to 320 ds	From 19 to 58 ds
		1 Pustular Eruption . . .	5 ms	Under cure date of last return
		2 Exanthematous Eruption . .	— 90 to 240 ds	From 28 to 120 ds
	3	1 Exanthematous Eruption . .	298 ds	Under cure date of last return
	2	Tubercular Eruption . . .	— 23 to 122 ds	From 26 to 35 ds
	1	Tubercular and Scaly Eruption*	19 ms	Under cure date of last return
	3	1 Exanthematous Eruption with Sore Throat . .	Simultaneous with the Ulceration	29 ds
		1 Exanthematous Eruption with Sore Throat . .	4 weeks	42 ds
		1 Exanthematous Eruption with Sore Throat . .	59 ds	Under cure date of last return
	2	Tubercular Eruption with Sore Throat	— 75 to 91 ds	From 14 to 31 ds
	1	Papular, Scaly, and Tubercular Eruption, with Sore Throat*	20 ms	} Under cure at the date of last return
	1	Pustular and Tubercular Eruption with Sore Throat . .	68 ds	
	3	Sore Throat only . . .	— 50 to 77 ds	From 43 to 63 ds

* Primary Affections Cured by Mercury at a former Period.

To complete our paper on the subject, we shall here introduce the following important and highly interesting document circulated by the Army Medical Board among the surgeons of the army at large, and which cannot but be read with the deepest interest by every private practitioner.

(COPY)

*“ Army Medical Department,
2d April, 1819.*

“ Circular.

“ ON SYPHILIS.

“ In transmitting the following summary of the conclusions on the question of syphilis and its treatment, we have to assure all that it may be considered as an unprejudiced statement drawn up from the answers *alone* of the regimental surgeons, to the queries transmitted by us to them in December last.

“ Without Mercury.

“ 1st. That since December 1816 to December, 1818, there appears to have been treated for primary venereal ulcerations on the penis (including not only the more simple sores, but also a regular proportion of those with the most marked characters of syphilitic chancre, as described by Hunter and other writers) 1940 cases.

“ 2d. That of these 1940 cases so treated, 96 have had secondary symptoms of different sorts.

“ 3d. That in these 96 cases of secondary symptoms following sores treated without mercury, it was deemed necessary to have recourse to mercury for a cure for twelve of them; for which change, the following different reasons are assigned, in different cases, by the surgeons who treated them.

“ *a.* On account of sloughing ulcers in the throat.

“ *b.* The protraction of cure beyond the third week.

“ *c.* Because the general health seemed to suffer.

“ *d.* With a view of expediting the cure.

“ *e.* The reappearance of eruptions, or aggravation of symptoms.

“ *Note.*—In several of these 12 cases, alterative doses of mercury were sufficient to effect the cure.

“ 4th. That in 1940 cases of primary symptoms treated without mercury, (as described in part 1st.) its use was resorted to in 65 of them; the reasons assigned being as follows:

“ *a.* An indisposition to yield to the local application in three weeks.

“ *b.* The sore spreading.

“ *c.* The appearance of fresh sores.

“ *d.* Buboës suppurating, and not disposed to heal.

“ *e.* The general health appearing to suffer.

“ *f.* A belief that the constitution became affected from the continuance of the sores.

“ 5th. That these 1940 cases, treated, as here above stated, are now ‘recovered of their venereal complaints,’ and either doing

their duty as soldiers, or have been discharged, for military reasons, totally unconnected with venereal disease.

“6th. That the principal remedies employed have been (speaking in general terms, and with reference to primary sores) confinement to bed in many cases, in all to hospital, spoon diet, occasionally general bleeding when inflammation ran high, (in six or eight cases) purgatives, antimonials, pretty generally emollient soothing applications in the first instance, generally cold or warm water, (the latter frequently injected between the prepuce and glans) and the first externally applied, the water frequently mixed with the liquor plumbi; in the latter stages, the lotio hyd. submuriat. or muriat. in aqua calcis, lotio sulphat. cupri, argent. nitrat., &c. were employed. With reference to secondary symptoms, when mercury was not had recourse to, purgatives, antimonials nitric acid, sarsaparilla, guaiacum in substance, or in combination with sarsaparilla, warm bath, nitro-muriatic acid bath, gargles when the throat is affected. In nodes, fomentations, scarifications, leeches, and blisters.

7th. That the average period required for the cure of primary symptoms, without mercury, when bubo did not exist, has been twenty-one days; with bubo, forty-five days.

“8th. That the average period for the cure of secondary symptoms without mercury has been from twenty-eight to forty-five days.

“9th. That every man treated without mercury has been fit for immediate military duty on dismissal from hospital.

“ With Mercury.

“1st. That during the period specified before, there appears to have been treated of venereal ulcerations of the penis, (the characters given of which do not appear to have been, in any essential degree, different from those treated without mercury) 2827.

“Note.—‘It may be perhaps well to view these as more generally bearing the character of Hunter’s chancre.’

“2d. That of the 2827 thus treated and healed, 51 have had secondary symptoms.

“3d. That there are good grounds for believing, that in the majority of instances, when secondary symptoms have occurred, where the primary symptoms have been treated with mercury, that the secondary symptoms are more severe, and more intractable than when mercury had not been used for the primary sores.

“4th. That one man treated by mercury for primary sores has been discharged the service on account of the injury his constitution sustained therefrom.

“5th. That another man, after treatment for secondary symptoms by mercury, has been discharged the service in consequence of that complaint.

“6th. That the average period occupied for the cure of primary symptoms without bubo, with mercury, has been thirty-three days; with bubo, fifty days; and that the great majority were fit for immediate military duty on dismissal from hospital.

“7th. That the average period occupied in the cure of secondary symptoms has been forty-five days.

Note.—“The treatment by mercury is so generally known, that it is deemed useless to describe it in either case.” Much the same local applications were used in the treatment with mercury to the sores, as was described in that without it; perhaps more stimulating and escharotic applications were used, and less attention paid to regimen and diet, when mercury was given, at least less stress seems to have been laid on these.

“General Observations.

“1st. From the statement above made, it would appear that *all kinds of sores*, or primary symptoms of syphilis, may be cured (as far as a period of nearly two years will warrant the conclusion) without mercury.

“It is considered that the exceptions, noted in paragraph 4th, do not present valid objections to the above conclusions, on viewing the general testimonies on this point; but to the reasons there assigned for the necessity of having recourse to mercury, the most particular attention is required, as on these must the propriety or impropriety of that measure depend.

“2d. To guard against any fallacy in the comparative estimate of time employed in the cure of primary symptoms with and without bubo, it must be noticed that this is only an average statement; in some individual regiments the period required without mercury has been longer than that with mercury.

“3d. That it appears that the frequency or rarity of secondary symptoms would seem to depend on circumstances not yet sufficiently understood or explained, although the following fact would tend to the belief that either the constitutions of the men, or the mode of conducting the treatment without mercury, are the causes that possess the greatest influence in their production.

“In one regiment 4 secondary cases out of 24 treated without mercury supervened. In another regiment 68 cases have been treated within the specified time without mercury, all bearing marks of true venereal disease, (and 28 of these especially selected for their decided characters of chancre;) no secondary symptoms of any kind have hitherto made their appearance, and in all fifteen months have elapsed since they were treated.

“To this circumstance most particular attention is required, both with the view of ascertaining if peculiarity of constitution influences the appearance of secondary symptoms, and of pointing out the necessity of attending to the proper selection of local remedies adapted to the different stages and states of the sore, and to the general treatment of the constitution during the time the patients are in hospital, and that whether mercury be used or not.

“4th. That it appears that no peculiar secondary symptoms are seen to follow from peculiar primary sores.

“5th. It has been remarked, that, in cases healed without mercury, iritis has been frequently observed as a secondary symptom, in some instances by itself. in others attended with eruptions of

different kinds. In these instances, mercury has been generally resorted to with success.

"6th. These appearances of primary ulcer, and repeated attacks of eruption, are the diseases which have been most frequently observed to succeed the non-mercurial practice.

"7th. The conclusions arrived at by the additional testimony of many more regiments not included in the number from whence this report has been drawn up, confirm, in every material circumstance, the results stated under both methods of treatment.

"From all that has been reported to us, we see no reason to stop the prosecution of the present inquiry, nor have we any objection to its being continued, but strictly in that spirit of patience, liberality, candour, and fidelity, that ought to characterize the inquiries after truth; a spirit altogether remote from the precipitancy of innovation, the acrimony of disputants, or the stickler for any particular doctrine.

"1st. It is therefore desired, that the queries heretofore submitted, with these additional points left undecided in this letter, may be considered as the leading objects for consideration in the future prosecution of the subject.

"2d. That every syphilitic case, whether secondary or primary, be duly entered in the register, with full description of the characters of the sores, symptoms, and treatment, so that the results of each half year may be distinctly and clearly stated in the reports required on these occasions; that every man belonging to any regiment, treated in a different regimental hospital to his own, shall invariably be reported through this office to his own regimental surgeon, who will duly register the report, and at the half yearly periods, state the results.

"That it is essentially necessary that each regimental surgeon keep a watchful eye over all men treated without mercury, and frequently examine them, and that whenever answers are required to these queries at a future period, which they will, (say the 1st January, 1820,) the state of the men now reported shall at that time be distinctly referred to, in the same tabular form as was required by the late queries, commencing as before from 20th December, 1816.

"We wish it to be distinctly understood, that we do not enforce the non-mercurial plan of treatment in any case, still farther is it from our wish to incur any unnecessary risk or danger to the soldiers by unnecessary detention from duty, from a protracted treatment without mercury, in those cases where it has been begun. At all times, this is left to the discretion of the surgeon, who, we are persuaded, will act in the most conscientious manner for the good of his patient, and the interests of the service.

(Signed) 'J. McGRIGOR,
'W. FRANKLIN.'"

Dr. Hennen here enters into a vindication of the non-mercurial practice as far as regards the recent objection made by Dr. Hamilton, jun. who "conceives that very alarming conse-

quences are likely to arise to children yet unborn, from the practice of the army surgeons." It is well known, as Dr. Hennen remarks, that there are various opinions on the subject of the venereal disease of the *fœtus* in utero; some contending that the *mother*, not the father, communicates the disease to the embryo; others, that it is the father, not the mother; a third party contend that the infant may be affected by both father and mother; while John Hunter denies the possibility of the *fœtus* in utero being affected by either. Impressed with the difficulty of forming a decided judgment upon so obscure a subject, Dr. Hennen first states his speculative opinions, and then details such facts as he has been able to collect.

"Unless a man has primary symptoms himself, I apprehend it is physically impossible for him to communicate primary symptoms to a female. Unless a female has primary symptoms, I hold it equally impossible for her to have secondary symptoms; and except she has secondary symptoms, she, I apprehend, cannot communicate them to the children in her womb; she may, indeed, as we all know, communicate primary sores to the *fœtus* in its passage through her vagina." 550.

Numerous instances, Dr. H. observes, are on record, where women having secondary symptoms, bring forth healthy children; and where fathers who have long had secondary affection beget perfectly sound offspring.

"That children are born with a disease *supposed* to be syphilis, and that this disease is not only fatal to them, but can be communicated by them to their nurses, and be propagated by the nurse to the destruction of more lives, is a fact that no man can pretend to deny. The nurse, however, must have a primary sore on her nipple or elsewhere, before she can disease the child. I know it to be a positive fact, that a nurse with secondary symptoms may suckle children with perfect impunity to them."

We ourselves have lately seen some children born with all the appearances of syphilitic disfigurements, which disfigurements disappeared by mild aperients without any mercury. This, indeed, does not prove that they were but syphilitic affections *in appearance*; it only goes to prove, that these congenital diseases are curable without mercury. The above facts render it extremely doubtful from which of the parties the disease is transmitted; or, indeed, whether it is transmitted by either. Dr. Hennen having circulated a string of queries in Scotland and the northern district of England, relative to this subject, the result is given in a table. The total of children born of parents who had undergone the non-mercurial treatment was thirteen. eleven of whom were born healthy, two

were stillborn, and one has become unhealthy since birth. A woman in the 88th Regt. excited a considerable attention in the Ed. Castle Hospital, in consequence of being diseased and pregnant. At the time that the secondary symptoms appeared in her, she was three months gone. She was treated without mercury, and the disease gave way in a little more than three months and a half. She was delivered of a still-born child in the eighth month of utero-gestation, not having felt any movement of the fœtus for two months before. Another woman treated without mercury also aborted of a dead child at the end of the seventh month. In both cases there was considerable abrasion of the cuticle upon the arms and sides, but no distinct eruption. These two cases certainly go towards the corroboration of Dr. Hamilton's doctrine; but two cases can prove little.

In the conclusion of this part of Dr. Hennen's work, he states, from good authority, that the non-mercurial practice has been adopted by some of the naval surgeons with a success even greater than in the army. In one ship fifty patients were treated without mercury, in one only of whom did secondary symptoms appear, under the form of blotches, and they were entirely removed in the course of eight days, without any mercury internally or externally applied. Other testimonies also, from the officers of the army, have recently come to the knowledge of our author, "which still farther tend to confirm the principles which he has advocated.

We have now laid a full analysis of this important section of Dr. Hennen's publication before our brethren, which will enable them to judge for themselves respecting the principles and practices therein brought forward.

We have but few remarks of our own to make on this momentous question. We conceive that the *possibility* of curing both primary and secondary syphilis is now beyond the shadow of doubt; and for the ascertainment of this important point we are solely indebted to the Army Medical Board and Officers, who alone could have made the trial on a scale, and with a precision that must carry conviction to the most sceptical mind. For this service to Medical Science posterity will long record the names of her zealous cultivators in the British army; nor will their liberal cotemporaries withhold the meed of their well-earned approbation.

In respect to the *eligibility* of treating syphilis without mercury, we think that reasonable doubts may be entertained. While the knowledge disclosed in the foregoing documents imperiously indicates the propriety of a far greater restriction in the use of mercury, for the cure of syphilis, than we have

hitherto thought proper, so there is nothing in the said documents that fairly goes to contra-indicate a moderate administration of the old remedy, where scrofula, idiosyncrasy of constitution, or other reason do not stand in the way, and induce us to trust to the powers of Nature, assisted by rest, abstinence, and gentle evacuations.

To what we have said of Dr. Hennen's work in general, at the opening of this article, we can add nothing more than our full conviction that it is one of the most practical, useful, and interesting publications which have fallen under cognizance for many years past.

X.

A History of the Variolous Epidemic, which occurred in Norwich in the Year 1819, and destroyed 530 Individuals : with an Estimate of the Protection afforded by Vaccination, and a review of past and present Opinions upon Chicken-Pox and modified Small-Pox. By JOHN CROSS, Member of the Royal College of Surgeons in London, Corresponding Member of the Société Médicale d'Emulation of Paris, late Demonstrator of Anatomy in the University of Dublin, &c. 1 vol. Octavo, pp. 296. London, 1820.

To restrain within wholesome limits an increasing population, it hath pleased Divine Wisdom to visit mankind, from time to time, with one or more of those savage destroyers of the human race ; namely, war, pestilence, or famine. Terrible as these evils will appear at the moment, there is no doubt that they are ultimately designed for our benefit.

"A human form, pampered, bloated, and plethoric, will often have the appearance of strength as well as magnitude ; though no state of it can be less adapted to facilitate the animal movements, or in greater danger of a hasty dissolution. The body politic also loses in muscular force, as much as it acquires of unwieldy size, till, by the gradual decrease of vigour and augmentation of weight, it totters on its baseless supports, and, at last, lies level in the dust with Babylon and ancient Rome."*

Although it may never be intended for human skill to annihilate the fell monster, which forms the subject of the work before us ; yet, an experience of more than twenty years has shown, that the great Jennerian discovery has the power to disarm it of its violence, and to regulate its course, so as to render it comparatively innocuous. We may guard against the furious blast or the raging storm ; but who can stay their approach, or control their duration, except the

* *Essays, Moral and Literary*, by VICENTIVS KNOX, D. D.

sublime Author of Nature, who unfolds the elements and agitates the Universe?

During a period of national adversity, various moral, as well as physical causes, which we need not detail, conspire to assist the generation, and to extend the ravages of epidemic diseases. Thus, the animal spirits droop, and the sanguineous stream, abating in its wonted force, deserts the smaller passages, and presses around the great vital organs. That fine harmony, which should animate every fibre, is disturbed; the nice balance of the moving powers is destroyed; and the first impression of morbid causes benumbs and prostrates the enfeebled and starving multitude.

Mr. Cross has divided his work into two parts. In chapter I. which treats of the small-pox, he observes, that Norwich has long been celebrated for the salubrity of its atmosphere, and the great age to which a considerable portion of its inhabitants has attained. Its buildings are spread over an extensive surface of ground; its population, amounting to about 40,000, one-third of whom, employed in trade and manufactures, is generally characterized by cleanliness and industry. Hence it has been comparatively exempt from contagious and epidemic diseases. In 1805 the small-pox prevailed so much as to excite some attention; and a second time, in 1807, when it became so extensive as to occasion 203 deaths to be recorded in the bills of mortality, between the latter period and the year 1809. It appeared again in 1813, when 65 deaths took place. It was accidentally introduced in 1818; and in the latter end of February, 1819, it extended from one of the charity-schools to all quarters of the city. From the list of burials, taken from the bills of mortality, it appears, that the greatest number of deaths took place during the months of June and July; the average being about 150 in each of those months. Of the children attacked, under 2 years of age, 260 died; under 4 years, 132. From this age onwards, the fatality progressively diminished, and no death is recorded of any person beyond the age of 40. The epidemic was confined almost exclusively to the lowest orders of the people, of whom about one in six affected with it died. Considerable variety was observed in the features of the disease; and all the petechial, and most of the confluent cases, terminated fatally.

“In one child mortification commenced in the cheek, and extended over one half of the face. In a girl, 14 years of age, who ultimately died, the labia pudendi sloughed away; a phagædenic ulcer, in a third case, spread from the angle of the mouth, and destroyed the lower lip.”

Bloody stools attended many of the worst cases; but the urine was not observed to be tinged with blood. The prejudiced and ignorant being the principal sufferers, the prescriptions of old women were more listened to than the advice of the medical attendant. Hence the phlogistic treatment prevailed, often to an injurious extent.

“In singulis ferme ædibus reperiatur stolidi aliqua, ac sciola.

muliercula, quæ in hominum perniciem, quam non didicit, artem exerceat."*

Several instances of severe small-pox occurred in adults, who had, at various times before, resisted the intimate and continued exposure to variolous contagion. The following fact was related, by one of the Suttons, to Mr. Bayley.

"A man, who believed himself to have had the small-pox, lived for twelve years as a nurse in the establishment for the reception of inoculated patients, which the Suttons had near Norwich, continually waiting upon the patients, who were undergoing the disease, and at the end of that time he caught the small-pox, of which he died."

A few instances occurred, in which there was reason to believe, that the disease had twice happened to the same individual, with the interval of several years between the two attacks; but our author only saw one well-attested case of small-pox after inoculation.

CHAP. II. *Of the Cow-Pox.*

The neglect of vaccination, which we lament to say has of late prevailed in all parts of the kingdom, was no less remarkable at Norwich; particularly among the lower orders of the people. So great, indeed, was the reluctance of the poor to accept gratuitous vaccination in that city, that Dr. Rigby suggested to the Court of Guardians, the expediency of allowing half-a-crown to every poor person, who should bring a certificate from a surgeon of having satisfactorily gone through the cow-pox. This plan having been adopted, 1066 persons claimed and received the donation, between the 12th of August and the end of December.† It has been customary for the vulgar, in all ages, to abuse their prosperity, and, forgetting the author of it, to neglect those means, whereby they might merit its continuance, until the day of adversity is at hand. This is beautifully described in the divine song of Moses, addressed to the Israelites in the following words:

"Thou art waxen fat, thou art grown thick, thou art covered with fatness: then he forsook God which made him, and lightly esteemed the Rock of his Salvation."‡

The humane plan of Dr. Rigby having been found ineffectual, and 1700 persons still remaining liable to the attack of small-pox, it was agreed, by the medical men in Norwich, that vaccination should not only be practised by them gratuitously, but that they should attend on the poor at their own habitations. This philanthropic conduct was deserving of the highest praise, particularly as

* Sydenham: Opera, p. 163.

† See Dr. Rigby's Appendix to Further Facts relating to the Case of the Poor, &c.

‡ Deuteronomy, Chap. xxxii. verse 15

it was pursued in a time of public distress, and in some instances, with inconvenience and hazard to themselves. We regret to add, that it did not fully answer their expectation, and to acknowledge, that we ourselves have often been induced to take the same step, and, after much persuasion and repeated visits, have only succeeded to a very limited extent. The number of persons vaccinated by our author exceeds 700. In every case he made two incisions in each arm, and employed ichor taken on the eighth day. He found about one in 50 incapable of taking the disease; and out of 500, of whom he kept a regular account, only 384 had it in a satisfactory manner. One child took the complaint after having been punctured in four places at six different times, and one or two resisted it in consequence of a cutaneous eruption. Of 112 families, comprising 603 persons, whom the author attended, and of whom he kept a regular register, "200 had small-pox."

One of these "had three months previously gone through the chicken-pox, and another had the same disease a few weeks after the small-pox; 91 had been vaccinated, two of whom had modified small-pox, and one had chicken-pox; and the remaining 312, who had small-pox formerly, or possessed a peculiarity of system, enabling them to resist it, had no eruptive disease of any sort during the epidemic."

On inquiring into the practice of others, the author observes, in a note, that he found only 11 out of 420, who had formerly been vaccinated, had suffered from an eruptive disease during the epidemic. These were all unattended with danger, and seemed to have been instances of modified small-pox. Besides the exposure to variolous contagion, several hundreds of those vaccinated from the earliest period of the practice, until within a few weeks, have been subjected to the additional test of inoculation with variolous matter during the epidemic, and in no instance has *regular small-pox*, as far as the author has been able to ascertain, been produced.

CHAP. III. *Of Small-Pox and Cow-Pox occurring together in the same Individual.*

The simultaneous appearance of two constitutional diseases in the same individual is a rare occurrence. It is, however, an established fact, that the cow-pox and small-pox are occasionally found existing together. The period at which the latter may present itself after vaccination is uncertain; it has been noticed as late as the thirteenth or fifteenth day, generally observing an imperfect course; but most writers in Britain seem to regard the fifth or sixth day as the latest time, at which it may appear and go through a severe course in conjunction with cow-pox.* In his popular view of Vaccine Inoculation, Dr. Adams says, "that when the feverish disposition, aris-

* GEORGE BELL on the Cow-Pox, p. 81.—WILLAN on Vaccine Inoculation, p. 7; and his Reports on Diseases of London, p. 314.

ing from natural small-pox, shows itself on the third day of vaccination, the latter will rather be hastened in its progress. It will afterward proceed with the small-pox pustule, retaining its proper figure, but without that surrounding redness, which marks its genuine character. Although the eruption of small-pox may come out during the progress of cow-pox, the contrary does not take place; when the former has come out on the second or third day after the insertion of vaccine virus, the latter has rarely produced any effect. In general, the later the period at which the small-pox has appeared, the more mild has it been rendered, and the more perfectly have the characters of the vaccine disease been maintained." When the variolous eruptions have appeared later than the ninth or tenth day after vaccination, our author has found them mild in their character, small in their number, and lasting only three or four days. A few exceptions to these general remarks are described in four cases, for the particulars of which we must refer our readers to the work itself. The following rules of practice, drawn from his observation and experience, we shall give in Mr. Cross's own words.

"*Firstly*, to vaccinate, although the variolous contagion may already have been caught, as the small-pox, if not prevented, is most likely to be mitigated, should the vaccination take effect; *secondly*, to avoid all unnecessary exposure of patients, undergoing the cow-pox, to the variolous contagion, until the areola is fading, because, although a great proportion will escape, there is a chance of some being affected by it, and it is desirable to shun even the most mitigated form of the variolous eruption; *thirdly*, when small-pox is prevailing, to give no decisive opinion of protection by cow-pox until the scab is about to fall off, that parents may not be deceived, nor the powerful means of safety be unjustly brought into discredit." *Chap. iii.*

From the existence of the two diseases together, it must not be understood that each maintains its usual intensity, and observes its regular course; on the contrary, it will be found that one of them will be attended and mitigated by the other, according to circumstances.

CHAP. IV. *Of Small-Pox after Cow-Pox.*

Our author's experience has not furnished him with a single instance of *regular* small-pox after cow-pox; and after the most diligent inquiry, he has not met with more than five cases in the practice of his professional brethren. Three of the patients recovered; the others died, one of them having confluent, and the other petechial small-pox. These failures can have no weight against the practice of vaccination, when compared with the immensity of 10,000 vaccinated individuals living in the midst of a contaminated atmosphere; while no less than 530 deaths were recorded out of little more than 3000, who had neglected to be vaccinated.

CHAP. V. *Of the Concomitant Eruptive Diseases of the Epidemic Small-Pox.*

The measles, though frequent and fatal the preceding year, were

hardly met with in 1819 ; the hooping-cough often occurred ; the scarlet fever, in a few instances, appeared ; but, on the whole, the contagious complaints incident to children were less frequent during the epidemic. The author, however, has confined his observations to those complaints which seemed to him to be directly influenced or produced by small-pox ; and of these, the first he has noticed is *petechial fever*. It attacked only a small proportion of those liable to small-pox, and generally proved fatal ; and during the whole of the summer no instance of it was seen in those who had previously gone through small-pox or cow-pox. The victims of it were chiefly feeble children. After symptoms of previous debility, a few purple or dark spots appeared, increasing in number daily, occupying the principal parts of the body, and varying from the size of a pin's head to that of a kidney bean. The colour and shape of the spots mostly resembled those which might be produced by scattering over the body ink from a writing pen. Every case seen by Mr. Cross terminated fatally, from the third to the tenth day of the eruption. In a petechial cadaver, examined by himself and Dr. Yelloly, the purple spots were found to penetrate into the substance of the temporal muscle. The stomach was contracted in the middle, like an hour-glass, and contained half a pint of dark, green, ropy fluid. Its inner surface was beset with petechial spots, like the external skin ; yet there were no petechiæ in the lining membrane of the œsophagus, nor of the large and small intestines. The patient died on the fourth or fifth day of the eruption.

“ Mr. Hull dissected a child a year and a half old, which (who) died on the sixth day of the variolous eruption, and found the rectum, colon, and ileum, marked with circular patches, distinct, white, and having an appearance of indentation in the centre. They were here and there congregated into clusters, and were situated beneath the mucous coat, resembling in figure and diameter of surface the cutaneous eruption, of which they seemed, as Mr. Hull himself well expresses it, to be faint imitations. White patches were also observable in the jejunum ; but neither circular nor indented. The œsophagus, stomach, and duodenum, presented none of these appearances.”

The next eruptive disease enumerated by our author, occurred indiscriminately in those who had passed through small-pox and cow-pox, and in those who had not had either of these disorders. Febrile symptoms having existed a few days, numerous vesicles broke out, transparent as crystal, and filled with a colourless fluid, enveloped in the delicate cuticular membrane on the shoulders, arms, face, and body. Many were large, oval, and prominent ; others were irregular and jagged at the edges ; while some were as small as pin's heads, and pointed at the top. They were surrounded with an irregular blush, and existed in considerable numbers on the scalp, Intolerable itching was present. About the third day the cuticular covering became semi-opaque, and its contents turbid or milky. Until the fifth or sixth day a succession of crops came out, and a

few days afterward the crusts fell off, leaving irregular stains upon the skin. The throat was usually sore, and every vesicle consisted of a single cell, which the author believes to be a characteristic mark of the eruption. In the decline of the disease, the contents of the vesicles approached to pus. The eruption was contagious, and was never observed to be followed by small-pox, although there was reason to believe that such an event occurred. Two children, however, were vaccinated after its occurrence with perfect success.

The last section exhibits the eruptive diseases, which had *chiefly* occurred in those who had passed through the cow-pox. Some of them consisted of a rash with sore throat; others of a conoidal, vesicular eruption; but the most important cutaneous affection presented pocks of the indented character, the different varieties of which are illustrated by numerous cases, which our limits will not permit us to transcribe. These indented eruptions were commonly preceded by vomiting, restlessness, occasional delirium, and other symptoms of fever, which was generally of the inflammatory, sometimes of the bilious, and in a case or two of the typhoid kind.

“The first appearances of the eruption have been small red specks, in the centres of some of which minute circular pocks, remarkably indented in the centre, have been evident in twenty-four or thirty-six hours. As to number, they have varied from twenty or thirty to as many hundreds.”

They have been found to advance most rapidly on the face, in which situation, the indented character has been lost on the third day, and on the fourth and fifth the pocks have been filled with a purulent fluid. Even when not much crowded, they have run into each other, attended with some swelling of the cheeks and eyelids on the fourth or fifth day, but never so as to close the latter, and always forming crusts of an irregular shape, making rough and accumulated masses.

“On the hands and arms, the indented pocks have been most numerous, and have mostly lost the indentation on the fourth or fifth day, their surfaces changing from flat and depressed to convex or spherical, and their contents passing from a colourless lymph into a turbid, wheyey, muddy, and, in a few pocks, even purulent fluid. The largest distinct pocks, examined at this time, have exhibited the base occupied by adhering lymph, which could not easily be removed. The pocks in this situation were hard and resisting to the touch, never being broken by accident, and never marked by a red circle at their circumference, save a minute line, to be discovered only by the magnifying glass. Upon the trunk the eruption has always advanced with less regularity, being often interspersed with irregular vesicles, consisting of one cavity, and forming no regular scabs. Similar appearances in the progress of the eruption have been visible on the lower extremities, a few only advancing so as to be indented and subsequently convex, whilst the rest have remained as conoidal vesicles or circular specks under the cuticle

forming no prominent eruption. Incrustation has been nearly completed, in most cases, by the sixth or seventh day."

On the upper extremities the incrustation was most perfect ; every pock, which in its progress was indented, left a flat, circular, and solid scab, frequently marked by a depression in the centre, and seldom more than one-eighth of an inch in diameter.

In every instance the throat has been sore ; and on the third or fourth day small circular yellow specks on the tonsils or posterior fauces were always to be found. The scabs, on falling off the cheeks, left tubercular elevations, which were absorbed in a week or two. The traces of the disease, after desquamation on the rest of the body, were confined to the temporary appearance of small circular, dull, red specks ; excepting the arms, which for the most part, presented slightly convex surfaces, not distinguishable by the touch. No pits remained, excepting a few trilling ones upon the forehead, nose, or cheeks ; neither was deformity, permanent injury, or death, produced in any instance. The mildest cases correspond with certain descriptions of varicella, and the most severe were regarded as modified small-pox. The author, however, considers them all to be a series of the same complaint, and feels little hesitation in announcing his belief, that they proceeded from the variolous contagion. They occurred when small-pox was most prevalent, often when subjects suffering from it were in the same room ; they were at other times traced to exposure to it, and at others they preceded for a few days the appearance of variola in the family. The cases, which never advanced so far as to present indented pocks, he has not known to be submitted to any experiment ; but the mildest examples, where such indentation existed, were found communicable by inoculation, producing, in a few instances, small-pox in those who had not before had either that disease or cow-pox ; while in a small proportion of the vaccinated, they produced an eruption similar to themselves in mildness and duration. These experiments were repeated by parents as well as medical men, and thus extended the opportunities of watching the results. The character which Mr. Cross regards as common to the whole of these eruptions is, that in each case some are found to consist of pocks, which are polyœcious or multi-cellular, which structure is proved to exist in all those possessing an indentation in the centre ; and it is this cellular structure that distinguishes them, in the eye of the pathologist, from the vesicular eruption, described in the second section of this chapter.

PART THE SECOND. CHAP. I. *Of the Distinctive Characters of the Small-Pox.*

When this disease prevails epidemically, it sometimes destroys above one-third of those affected by it ; and at others, not more than one out of fifty. From those extremes, it is evident it must be subject to great variety. In its regular course, it is preceded, even in mild cases, by three or four days of severe indisposition ; and the manner in which the eruption commences has ever been

regarded as characteristic. It appears generally first upon the face, is completed in three or four days; on the fifth or sixth day the contents of the pustules are changed to a turbid fluid; and on the eighth day they become distended with pus. Dr. Adams and Dr. Jenner have recorded a variety of the disease, which does not proceed to perfect maturation.

At the time of suppuration, a crimson areola encircles the variolous pustule, and the febrile symptoms return during the suppurating stage, and attend the commencement of scabbing. Where the eruption is plentiful, this secondary fever is always present; together with a peculiar fœtor.

The late Mr. John Hunter, in dissecting a fœtus born with the variolous eruption, found in each pock a slough of the cutis vera, answering in dimensions to the size of the pustule. This slough, in some instances, forms the pitting, and he believed it to be confined to the small-pox, and not so much owing to the intensity as to the peculiar kind of inflammation. Mr. Ring and Dr. Adams agree, that this slough forms the certain sign of variola. The pits which follow the complaint are various; and it has been asserted, that those which are irregular, and of the same colour with the surrounding skin, proceed from genuine small-pox; while those which are circular, superficial, large scars, of a lighter colour than the adjoining skin, are the consequences of a spurious disorder.

As we never wish to see small-pox inoculation revived, we abstain from following our author in his attempts to ascertain a criterion whereby we may decide its security; and hasten to another part of the subject, to which he appears to have paid great attention; namely, the anatomical structure of the pock. After animadverting on the arrangements of some of our most celebrated Nosologists, he observes, that the first indication of change in the cutis is the appearance of a small red spot, in the middle of which a firm knot is perceptible to the touch, although not so soon visible. In twenty-four hours, a pimple is observed in the centre, which increases so as to present an acuminate vesicle, which gradually changes its form, and on the fourth day becomes a vesicle perfectly circular, somewhat flattened on the top, and indented in the centre, as if the point of a pin had been pressed upon it, and had left the impression. The vesicle is now one-eighth of an inch in diameter, and has often a reddish or bluish appearance, proceeding from the inflamed and vascular portion of the skin being seen through it and through a limpid fluid, which is contained in different cells. To a cellular structure of this sort, the author thinks the term *pock* should be confined. The walls of the cells being perfectly transparent, their disposition during life is not easily ascertained. The arrangement of the partitions, first described to him by Professor Macartny, of Dublin, he has found, after death, to correspond with the axis, spokes, and circumference of a wheel. The vaccine pock bears a strong resemblance to the variolous, in being multi-capsular. Dr. Willan, speaking of the cells of cow-pox, says, "these are perhaps only a portion of the *cellular membrane* distended by the ef.

fusion of lymph." Mr. Cross justly censures this opinion ; and observes, that the cellular membrane is out of the way : the dense and less vacular part of the skin being between it and the basis of the pock.

The cellular structure is formed by the *rete mucosum*, or by a freshly organized substance thrown out by the cutis itself, and excavated into cells for holding the fluid of the pock. The walls of these cells secrete the contained fluid, and if this be partly let out by a puncture, the drying of the lymph closes the part opened, and the fluid being again secreted, distends the pock to its former shape. The variolous pock grows more in circumference than elevation after the third or fourth day, and on the fifth or sixth its size is a quarter of an inch, when the indentation is less observable, and the contents cease to be transparent. A red circle shows itself at the circumference, and becomes wider as the pock increases. After this, the surface becomes convex ; the point, which was indented, being now the highest part ; the circular shape is exchanged for one oval, oblong, or irregular ; the contained fluid, at first turbid, is afterward purulent, and the cellular structure is altered, the walls or partitions being thinner, broken up, or partly absorbed, so that a great proportion of the fluid will escape by one puncture. These changes are effected by the eighth day, when incrustation commences.

In the most regular small-pox, the eruption advances variously, being influenced by the structure of the parts affected ; and mild cases may occur, which cannot, by any single rule, be determined to be variola. Even the existence of a slough deserves not to be implicitly relied upon : its presence in all the pocks only proving small-pox ; but its absence, from a great proportion of them, not proving the contrary.

CHAP. II. *A Sketch of the History of Varicella.*

An imperfect eruption, not protecting against a future attack of small-pox, was noticed as early as A. D. 900, by Rhazes ; and since that time by Vidus Vidius, Sennertus, and Riverius. It was variously denominated : *e. g.* spurious, lymphatic, crystalline, &c. Sydenham, too, alludes to a spurious kind of small-pox, having no connexion with the real disease ; and about 1690, Morton adopted the term *chicken-pox* from the vulgar, and introduced it into our Medical Nomenclature. At this period, some regarded the eruption as the mildest small-pox, while others believed it to be of a different genus ; but they all agreed, that it had no power to prevent small-pox.

The variolous inoculation, which was introduced into England in 1722, may be considered as a second era in the history of varicella. The principal writers on this subject were Fuller, Hoffman, and Van Swieten. The last author divided the spurious pocks into three species ; the *steen-pocken*, the *water-pocken*, and the *wind-pocken*. Vogel accepted the term *varicella* ; and Sauvages remarks, that " what the English call the *chicken-pox* is that variety of small-pox. in

which the pustules terminate by resolution on the seventh day, without suppuration or any perceptible fever, and without danger." In the year 1767, Dr. Heberden read a paper on chicken-pox. It does not appear that he ever witnessed inoculation from this disease, but he implies, that it can thus be communicated. Dr. Sims's account of chicken-pox, in his Treatise upon Epidemic Diseases, is unfortunately rendered imperfect by his omitting to mention whether the small-pox happened to be prevailing at the same time. Hence we are uncertain whether the complaint described by him was spurious small-pox, or a mild sort, vulgarly denominated *swine-pox*, and mentioned by Dr. Jenner, as we have before remarked. John Hunter and Dr. Adams observed, that chicken-pox does not commonly produce a slough. Cullen made it a distinct species.

The discovery of the immortal Jenner, which was made known in 1798, forms a third period in the account of varicella. Dr. Frank, of Vienna, separated it entirely from variola, and placed it in a different genus, under the title of *Pemphigus Variolodes*, which he subdivided into *vesicularis* and *solidescens*. Mr. Ring related a case of *confluent* varicella, and observed, that the chicken-pox occasionally extends to the fourteenth day. Dr. Willan, who certainly formed the best arrangement of diseases of the skin, which was ever published, divided the varicellous eruptions into three species; the *tenticular*, the *conoidal*, and the *globate*. As he nowhere represents these pocks to be evidently indented upon the surface, it is probable that he considered all eruptions, having that character, as modified small-pox; as did also Professor Montesante of Padua, who published a memoir on the disease in 1816. When the small-pox prevailed epidemically at Montpellier, Berard and De Lavit believed it to have the same origin with varicella, which occurred at the same time, while Dr. Fontaneilles, who practised not fifty miles from that place, referred every example of chicken-pox to a separate and distinct contagion. It was even propagated from one individual to another, in the latter instance. Moore states, that on the first day a small vesicle may usually be seen, and little or no coagulable lymph is effused to thicken the cuticular membrane; a serous secretion is poured out under the *rete mucosum* almost with the rapidity of a blister, and little vesicles are quickly formed, more pellucid than those in small-pox, yet surrounded with inflamed borders of various breadths. "On the second day the vesicles are larger, but neither concave, clouded, nor hedged round with coagulable lymph. But as they fill, the liquid separates the *rete mucosum* and cuticle from the cutis; and as one side yields more than another, the vesicles occasionally become oval, or lenticular, or in some degree irregular. Often, however, they retain a regular round figure, but not so constantly as in small-pox." Professor Monro believes the disease to proceed from a distinct contagion, to occur only once to the same person, and to be incommunicable by inoculation. Mr. Bryce, with most English writers of the present time, considers it to be a disease, *sui generis*; and his description of it is corroborated by additional remarks of Dr. Abercrombie and Dr. Alison. We

have lately noticed a distinctive mark, related, we think, by Dr. Thompson of Edinburgh, whereby our diagnosis is likely to be greatly assisted. On breaking the vesicle or pustule of variola, by rubbing the finger over it, a *tubercle* is found, which is not perceptible in varicella. This tubercle is occasioned by a peculiar inflammation of the true skin, and is probably the rudiment of the subsequent slough.

CHAP. III. *Of modified Small-Pox, and its Classification with Variola and Varicella.*

Soon after the introduction of cow-pox, it was ascertained that the variolous contagion was capable, in some instances, of producing the same effects at a remote period, as during the progress of the vaccine disease, giving rise to a mitigated variolous eruption, which Mr. Dunning, one of the earliest supporters of vaccination, denominated *modified small-pox*. In France, where the small-pox has lately existed epidemically, a violent controversy arose among the medical men respecting the eruptive disease, which appeared in those who had been vaccinated; some giving it the name of modified small-pox, while others as strenuously believed it to be a severe kind of varicella. In Holland, the same appearances presented themselves; and in Wertemburg, where the epidemic also prevailed, the vaccinated were found to escape with a mitigated variola, excepting two instances, in which the disease proved fatal.

In the eruptive complaint, which has been styled modified small-pox, the preceding symptoms resemble those of the regular small-pox, and are relieved on the appearance of the eruption, which is first observed on the hands or face, resembling red spots of inflamed cutis, and attended with thickening sufficient to be perceived by the touch. In twenty-four hours a pimple is to be distinguished, which soon enlarges into a conoidal vesicle, seated on a slightly elevated basis; and on the third day circular pocks, indented in the centre, firm and resisting, are intermixed with others less advanced. On the fourth day some become convex, and resemble small pearls, while others remain indented. The larger ones can now be ascertained to be cellular, and contain a clear fluid at the summit, and a firm lymph at the basis; and if the whole be taken away, the cutis beneath presents a convex surface. Those on the face contain a bright yellow fluid, and the largest, in other parts of the body, are filled with a milky, or thick dirty liquor. Without any return of fever, the incrustation commences on the third, fourth, or fifth day, and is nearly completed by the sixth: many of the scabs being solid and circular, and the largest not often exceeding one-eighth of an inch in diameter. The throat, during the eruption, is sore; and on the second or third day, the tonsils and posterior fauces almost constantly exhibit yellow circular specks. At the end of three or four days the scabs fall off, and leave tubercular elevations, particularly on the face and arms. As the central depression disappears in the progress of the complaint, the eruption should be carefully

examined during the first four or five days. When the indentation is observed, all agree that it is most marked, while the contained fluid is clear, and must not be confounded with the depression produced in other eruptions.

When the eruption is extensive, it may be attended with typhoid symptoms, but the secondary fever is entirely absent. In these cases the incrustation commences on the fifth day, and the declining period presents a variety of blotches, which never become prominent; pocks incrustated, pimples subsiding without crust, and a few pustules still distended with fluid until the eighth or tenth day. The flat scabs may remain for two or three weeks on the extremities. In rare instances, such cases have been complicated with petechiæ; and Moore observed a few cases, "in which the eruption was *confluent*, and did not reach the acmé until the eighth day. But even in these cases, no secondary fever ensued, and all the symptoms and vestiges of the disease vanished with remarkable rapidity, leaving few or no pits."*

"A rash occasionally precedes or accompanies the most regular cases of modified small-pox; and the mildest effect of variolous contagion (our author observes) seems to be shown in the production of a rash and sore throat, without any eruption of vesicles or of febrile symptoms for a day or two, that subside without the appearance of any affection of the cuticular surface."

All these varieties are found to proceed from one source, namely. the variolous contagion; and the modified small-pox occurs mostly in those who are, by some natural or artificial protection, rendered incapable of going through the regular small-pox. The contagion from mild cases of the modified disease, acting on a person who has neither had cow-pox nor small-pox, will sometimes produce the latter with all its horrors; but its effects are better ascertained by inoculation. These experiments produce an extraordinary phenomenon, by inducing a disease differing both in character and severity from the one whence it was derived. In a small proportion of the vaccinated, inoculation will produce the modified disease; but it has not been ascertained how it will affect those who have had the small-pox. The experiment having been made on those who had neither cow-pox nor small-pox, it has been found that a vesicle on the arm, with a rash, or a few pimples on the body only, will sometimes be produced, leaving the subject equally liable to small-pox.

The proportion of the vaccinated who receive modified small-pox has been variously stated. Our author's opinion is, that not more than one in twenty will be in any way affected by the most intimate exposure to variola in the same room: and that less than one in fifty will have the disease in a form answering to the generally received description of modified small-pox.

Having considered and described the eruptive diseases following vaccination, we shall direct our inquiry into the causes of their

* Moore's History of Vaccination, p. 107.

happening to some and not to others. At an early period, Jenner observed, that the "constitution loses its susceptibility to small-pox contagion, and its capability of producing the disease in its perfect and ordinary state, in proportion to the degree of perfection, which the vaccine pustule has put on in its progress; and, that the small-pox, if taken subsequently, is *modified* accordingly." This, like most of his opinions, has been supported by the testimony of subsequent experience; and incomplete vaccination having not improperly been considered as one cause of failure, the propriety of leaving one vesicle untouched has been suggested, and we believe the practice has been of late extensively adopted. Diseases pre-occupying the system or the surface of the cutis, eruptions, scald-head, teething, prevailing contagious disease, are also enumerated by our author among the causes, which may interfere with the progress of the vaccine pock. Hodenpyl believes scabies, rickets, scrofula, and cancer, to have the same effect; and Elsässer mentions, that in a district, where scabies was endemic, many cases of regular, as well as modified small-pox, occurred among the vaccinated; and on inquiry, it was discovered that a scabious child had been vaccinated, from whom ichor had been taken, which produced an irregular and imperfect disease. Vaccination having been followed by small-pox to an alarming and fatal extent, in a district of Silesia, an investigation of the cause of failure was undertaken; and it was ascertained, that the people had all been vaccinated by the same surgeon, who had been in the habit of taking the virus as late as the *eleventh* day, often from vesicles, which had been rubbed or scratched, so as to be injured in their structure; and had even raised an imperfect scab to obtain what moisture he could, with which he had propagated the disease.

With respect to the period at which the modified eruption may occur after vaccination, our author says it may happen at any time after the first few weeks; and that the former disease, in general, proves less mild in those above three or four years of age, than in those who are younger; and that it is rarely attended with danger at any age. Of Dr. Gibson's two hundred and fifty-one cases of *small-pox* after vaccination, it appears, that by far the greatest number attacked were those vaccinated less than two years. Dr. Thompson's varioloid eruptions occurred at various intervals, from a few days to fifteen years; not warranting the suspicion that the preventive or modifying power of the cow-pox was weakened or exhausted by time: increasing years appearing, in general, to lessen the susceptibility to small-pox contagion.

When the local and constitutional effects of the vaccine disease have been apparently perfect and regular, small-pox will now and then follow. This, it is evident, must be owing to peculiarity of constitution, as the same occasionally happens after variolous inoculation.

The modified small-pock resembles the chicken-pox, in consequence of its only passing through the papular and vesicular stages; but a little attention will enable the practitioner to distinguish them.

The former may also be recognized, when small-pox are suspected, by observing some vesicles within twenty-four hours after the first appearance of the papulæ; that the largest pox seldom exceed a quarter of an inch in diameter; that the size of the scabs bears a proportion to them; that the scabbing process is accomplished at different periods, from three to eight days; and that *a few of the pocks only advance to an imperfect suppuration*, the rest being checked in their progress, remaining as spots or pimples, or incrusting *while their contents are transparent*.

The author believes the term varicella to be strictly applicable to the modified small-pox; for which opinion he offers the following reasons. All the forms of varicella have, at various times, been classed as small-pox; and *vice versa*. In those parts of the continent, where this disease exhibited indented pocks, modified small-pox has been very rare. The mildest cases of modified small-pox are not incompatible with the descriptions of chicken-pox, by the most esteemed modern authors in England. To complete the analogy, he proposes to divide the genus into two species, or the species into two varieties:—1. *Varicella cellulosa*, or *cellular chicken-pox*, the synonymes of which are *stone-pock*, *horn-pock*, *modified small-pox*, *pemphigus variolodes solidescens*. 2. *Varicella bullosa* or *vesicular chicken-pox*, the synonymes of which are *crystals*, *water-pox*, *pemphigus variolodes vesicularis*, *mild vesicular small-pox*. As the titles sufficiently indicate the structural difference of the two species, we shall not detain our readers by any farther explanation.

CHAP. IV. *Of Variolous Inoculation, and the Means of discouraging it.*

During the first eight years after the introduction of this practice into England, only eight hundred and ninety-seven individuals submitted to the operation, of whom seventeen died. Its adoption in other countries was even slower and less extensive: in some, it was not employed for above half a century; and in others, from its disastrous effects in spreading the contagion, it was actually prohibited by an act of the legislature. Dangers, as well as difficulties, were found to accompany it, and the number of deaths has been rather increased than diminished by it. This fact has been recently illustrated by Sir Gilbert Blane in a paper published in the *Medico-Chirurgical Transactions*, Vol. x. Part 2.

Respecting the small-pox hospital in this metropolis, our author says—"Inoculation is still performed upon those who choose to be admitted for the purpose, but the number has been small, six hundred and ninety-one only having been inoculated as in-patients from May 1808 to December 1819; of these, thirty-four were inoculated in 1818, and forty-four in 1819. Although the amount is so trifling, it must remain a subject of regret, that a practice discouraged by every associated body of medical men in the universe, and prohibited, under severe penalties, in half the nations of Europe, should be apparently sanctioned by a charitable Institution, originally

established with the most humane views, and supported by individuals of the greatest benevolence. I have been informed of the small-pox being twice brought into the neighbourhood of Norwich, by patients discharged from this Institution, the contagion being probably conveyed by their woollen-apparel, which had undergone no purification previous to their dismissal."

From the opening of this Institution to the end of 1819, including a period of seventy-three years, the average number annually inoculated was six hundred and fifty-eight; while, during a period of twenty-one years from the introduction of cow-pox to the end of 1819, the average number vaccinated was 2224. Dr. Bremer has arranged a table of deaths from small-pox in Berlin, before and since the practice of vaccination, from which it appears that the numbers sacrificed to the former were :

During inoculation, from 1790 to 1799 - - - 4117.
1808 — 1817 - - - 1367.

Here is a diminution of 2750 in the number of deaths during the latter period.

The want of some *efficient* means of preventing variolous inoculation and its consequences was severely felt at Norwich, during the season of the epidemic. Those labouring under small-pox exposed themselves in the streets, and on the public roads, at all times of the day; and itinerant inoculators, irregular practitioners, and old women, introduced and extended the disease to all quarters by inoculation, regardless of the admonitions given to them; because the law authorized no *direct* measures against them. To remedy these evils, our author proposes, with his accustomed humanity, several regulations, which we should be happy to see universally adopted; but we much fear that some of our wiser senators would foresee the ignorant opposition and danger which would arise, were any attempt made to diminish the *rights* and *liberties* of a British subject, except the whole nation were composed of *rational* beings.

CHAP. V. Of Vaccination, and the Means of promoting it.

The progress of the genuine vaccine pock has been so well and so extensively described and understood, that a farther account of it would be superfluous. When the vesicle has risen properly, the areola formed duly, and all the characteristic local appearances are present, it is supposed that the system has felt the influence of the topical disease, and will afterward resist small-pox. The symptomatic fever is not always to be observed. Soreness in the axilla is an uncertain symptom. The inserting of ichor afresh on the fifth day, which gives rise to a pock of diminutive size, *incrusting as early as the original one*, is doubtless, when it succeeds, the best test we possess.

The circumstances, under which it is expedient to re-vaccinate, are the following: where the disease takes a spurious or irregular character: where the system was pre-occupied by any disease:

where the same supervened during the progress of cow-pox ; and where the scar left is feeble and indented. Ichor should be taken, while limpid, from a genuine vesicle on the eighth or ninth day, just before or during the formation of the areola ; and the patient furnishing it ought to be free from cutaneous eruption and constitutional disorder. It should be used, if possible, within forty-eight hours. Our author thinks it will be found, in general, most convenient to receive it upon points of quill or ivory : which, after becoming dry, should be corked up in a small phial. The plan we generally adopt is to confine it between two plates of glass, in which situation we have often found it perfectly fluid at the end of twelve hours, and more concentrated and equally effectual as when taken fresh from the arm.

The most eligible time for the operation is from the third to the sixth month ; and where many are vaccinated at the same time, the surgeon will find it convenient to keep a register of the progress of the disease. The plan of making four punctures, and of leaving at least one untouched, is, we suppose, now universally pursued. The opening every vesicle and pressing out their contents are strongly reprobated by the author, who believes this practice may be the cause of failure.

In support of the general utility of cow-pox, we may observe, that, although our belief of its *preventive* power has been diminishing for some time past, yet repeated experience has so fully convinced us of its *modifying* property, as to remove all doubt on that subject in our own minds ; and we believe that all the experienced and intelligent members of the profession have arrived at the same conclusion.

By endowing an Institution in this metropolis for gratuitous vaccination, and for supplying lymph to applicants in all parts of the kingdom, free of expense, the British Government has made an effort to diffuse the benefits of vaccination, which is highly creditable. By making application to this (the NATIONAL VACCINE) ESTABLISHMENT, in an enclosure addressed to the Secretary of State for the Home Department, lymph can be obtained FREE OF ALL EXPENSE. The poor, our author remarks, should be vaccinated at the expense of the parish in which they reside ; and, in many situations in the country, we have no doubt that such an arrangement would facilitate the extension of cow-pox more effectually than any other. Our medical friends in the country inform us, that they experience increasing difficulty in promoting the practice of gratuitous vaccination, in consequence of a prejudice the poor entertain, either with respect to the quality of the morbid fluid employed, or the views of the inoculator. In large towns, particularly where the greater part of the inhabitants is employed in manufactories, Institutions should be formed to promote the general diffusion of the cow-pox ; and where great apathy or prejudice might exist among the lower orders, we think it might be useful to connect some immediate advantages with the practice. The plan of allowing a bounty on inoculation, must, in populous districts, be partial in its

operation ; and those only would accept it who were in extreme poverty and distress, on account of the prejudices above stated, which we apprehend would be found prevailing in all parts of the empire ; and which, we fear, would rather be increased than diminished by the practice. Our author proposes, that all heads of families should refuse to take into their houses servants liable to small-pox ; and he thinks that guardians of the poor would not exceed their duty, by inquiring of every pauper, who applies for relief, on account of an additional number of children, whether these have been vaccinated, and by giving them accordingly a liberal or rigid allowance. It would be advantageous, if it were practicable, to compel all the poor indiscriminately, who have not had small-pox, to be vaccinated before they receive parish relief. Their interests and immediate wants would thus invite them to perform their duty towards their children, without increasing the heavy burthens of the more opulent and industrious. A wholesome regulation had existed at Norwich, but was suffered to fall into neglect, which we hope will be put in force in our National Schools. It was a standing rule in a large establishment of this kind at Norwich, to admit none but those who had gone through small-pox, or been vaccinated.

In despotic governments the extent to which vaccination has been carried is astonishing. In Russia, no less than 1,200,000 received the benefit of it, between the years 1804 and 1812. In Denmark, the small-pox no longer exists ; and in a *circular* addressed in July, 1816, to all magistrates and bishops in that country, it was ordered that all should be vaccinated, without a compliance with which injunction no individual could be received at confirmation, admitted into any school or public Institution, or bound apprentice to any trade. Priests were also forbidden to marry those who had not either had the small pox or cow-pox. In Prussia, if any persons happened to die of small-pox, they were directed by an edict, published in 1816, to be buried within twenty-four hours, *silently* and *unattended*, without the tolling of a bell ; and in such veneration is the great discoverer of vaccination held, that the 14th of May is made an annual festival to commemorate the day on which he made his first experiment. None but medical men regularly educated were allowed to vaccinate in the kingdom of Bavaria, and each was required to keep a register, which was returned to the government every three months. For this trouble they were rewarded according to the zeal they manifested in the cause. With the hope of wholly banishing the small-pox, it was enacted, by Maximilian Joseph, King of Bavaria, that from July 1808, all persons above a certain age, who continued to neglect to be vaccinated, should be fined by an increasing penalty every year, so long as they refused to take the means for their own protection. Variolous inoculation was forbidden, and a penalty enforced against all those who performed or submitted to it. Measures equally coercive are now in force in the kingdom of Wirtemberg.

We have now presented our readers a full analysis of the work before us, with the exception of three appendices, the first containing a translation of Dr. Heim's Paper on the Diagnosis between Variola and Varicella; the second, the Result of a Correspondence with Practitioners in the County of Norfolk, and adjoining parts of the County of Suffolk; and the third, an Abstract of a Report of the Vaccinations practised in France in 1816. The length to which we have already extended this article, will not permit us to enter into the particulars of these additamenta. We, therefore, refer our readers to the work itself, which we have no doubt they will peruse with as much pleasure and information as we ourselves have done; and we conceive, that all those who are not intimately acquainted with the latest information respecting the important subjects treated of in Mr. Cross's book, will do themselves an injury, if they fail to purchase it; and we earnestly recommend them to place it on the same shelf with the best dermalogical works of British and Foreign writers.

Mr. Cross had previously given a convincing earnest of his talent for observation, in his Medical Sketches of the Parisian Schools of Medicine; the present work realizes the expectations which we then formed of his professional character. The theatre for practical research and medical improvement in which Mr. Cross is now placed, will furnish him with ample materials for the exercise of that strong intellect which is lent to him, not solely for his own use, but also for the good of his brethren of the present and future generations.*

Miscellaneous Intelligence.

1. *Tracheotomy.* This operation has lately been twice performed by Mr. Richard Carmichael, of Dublin. In one case, for croup in an adult female, the operation was completely successful. A portion of one of the rings of the trachea was removed, in the manner recommended by Mr. Lawrence. In the other case, the impediment to respiration was occasioned by an abscess which had formed between the œsophagus and cervical vertebræ, and obstructed both

* We found it impossible to comprehend, in this article, an analysis of the very interesting and important work of Professor Thomson, of Edinburgh, on the varioloid diseases which have lately appeared in North Britain. We regret this the less, however, as the work itself, and a most valuable Review of it, in our highly respected cotemporary, the Edinburgh Medical and Surgical Journal for April last, have made the contents of the volume widely known throughout the profession. It appears, moreover, that Mr. Cross's work includes all that is known on the subject up to the present moment, besides several minute and important pathological particulars not hitherto ascertained.

passages. If the cause had been ascertained before death, Mr. Carmichael thinks the patient's life might have been saved. The details of these cases, and useful practical remarks on the diseases which formed the subjects of the operations, will be given in the forth-coming volume of the Transactions of the Royal College of Physicians of Ireland.

2. *Seeds of the Colchicum Autumnale.* Dr. W. H. WILLIAMS, of Ipswich, who is already well known to the Profession, as a most intelligent and respectable physician, has published, in the last month's MEDICAL REPOSITORY, an interesting paper on the effects of the Seeds of the Colchicum Autumnale in Chronic Rheumatism.

The preparation he employs is as follows :

R. Sem. colchici autumnal. siccata. ʒij.

Vini Hispanici [Sherry] - - Oj.

Digere per dies octo vel decem, subinde agitando, cola, et in vasi probè clauso usui serva.

In adults, he commences with a fluid drachm, in a little aromatic water once or twice a day, gradually increasing the dose to three drachms ; beyond which he has not had occasion to go. It should be taken two or three hours after breakfast, and repeated at bedtime. Its only sensible operation is relieving the sufferings of the patient, and gently operating on the bowels. Dr. Williams has cured a number of patients labouring under obstinate chronic rheumatism, and entertains sanguine hopes "that we have at length found the happy desideratum, a powerful, yet mild, medicine, capable of substituting calmness, tranquillity, and balmy sleep, in the place of pain, weariness, and restless nights—a renovation of long-lost limbs, and comparatively robust health, in lieu of feebleness and emaciation."*—May the anticipations of this worthy physician be realized ! The colchicum autumnale abounds in several parts of Suffolk, and grows plentifully in the North and West of England. The seeds should be gathered in the end of June or early in July, carefully dried, and kept in a dry place. Any application to Mr. Fitch, chymist, in Ipswich, will readily obtain the quantity desired. While the medicine is used, it is desirable to avoid flatulent food, especially fish, broths, gruel, milk, puddings, and undressed vegetables ; together with a diminution in the usual quantity of beer, tea, coffee, and chocolate. We think the profession indebted much to Dr. Williams for the introduction of a medicine that promises to be so useful in the practice of the healing art.

3. *Extract of Pyrola Umbellata.* We ought, in our last Number, to have acknowledged the receipt of a paper from Dr. Crane, Physician to the Boston Dispensary, containing some interesting cases, where the extract of *pyrola umbellata* was exhibited in much larger doses than have been recommended, but with very doubtful effects. A few days ago we received, from Dr. Crane, another well-detailed case; but which is too long to insert at present. The result of Dr. Crane's experience, however, may be gathered from the concluding passage in his last letter.

"From what can be drawn from this case, my former conjectures appear to be in a great measure confirmed; viz. That the medicine in question may be given in much larger doses than were first prescribed—that, uncombined with other diuretics, it does not appear to increase the secretion of urine—that, in large doses, it may, in some particular cases, be regarded as an auxiliary to other medicines well known to possess diuretic qualities—and lastly, that in no case ought any reliance to be placed upon its supposed virtues in dropsical affections."

W. CRANE, M. D.

4. *Note from Dr. GEORGE PEARSON to Dr. JAMES JOHNSON.*

George-Street, Hanover Square,
Aug. 7, 1820.

Dear Sir,

I think the Medical Public are greatly in debt to you for your admirable exposition, and judicious pathology on apoplexy, contained in the leading article of the last number of the *Medico-Chirurgical Review*.

Notwithstanding the minute researches published by Dr. Abercrombie and yourself, unless I have overlooked the record, the important pathological fact—the ossified condition of the cerebral arteries, especially of the carotids, has been omitted. I believe the late Mr. Cruickshanks, or Dr. John Hunter, first made public this condition of the arteries in the brain, and I have very often observed it in persons who had died of apoplexies. I have not time to enter into any discussions; but I conceive, that those carried on so temperately, yet zealously, between Dr. Abercrombie and yourself, must widely spread the most useful practical information. As a mark of my attention, I trouble you with this small contribution.

I remain, dear Sir, with much esteem, your faithful servant,

GEORGE PEARSON.

In returning thanks to Dr. Pearson for his obliging remarks, and Communication, the Editor begs to say, that although ossification of the arteries was not distinctly stated in the *Etiology of Apoplexy*, yet, among the exciting causes of the disease were placed—"those chronic disorganizations which take place within the cranium, and which, by obstructing the circulation, compressing the cerebrum"

mass, or otherwise injuring the vital powers of the brain, excite that state called apoplexy." P. 6.

In an eclectic article, in a Journal of this kind, it is the object rather to delineate the leading principles of pathology and practice than enumerate the particulars; and, on this account, the writer of the article alluded to abstained from detailing the great number of organic lesions of the brain which have been recorded by authors, as predisposing to, or exciting apoplexy.

APPENDIX EXTRA LIMITES.

I.

Annual Report of the Associated Apothecaries and Surgeon-Apothecaries of England and Wales; held at the Crown and Anchor Tavern, Strand, London, June 21, 1820, JAMES PARKINSON, Esq. President.

THE Committee has the honour of laying its Annual Report before the General Meeting of the Association.

No particular circumstance has occurred during the past year, demanding immediate exertions, yet has your Committee not been inactive.

The great object which the Association hopes one day to see obtained, namely, a legal enactment, by which the health of the public will be guarded against the manifold evils which daily arise from the practice of uneducated, and, therefore, unqualified persons, has been duly and constantly kept in view.

The Committee is much gratified in being able to state, that the Code of Rules and Regulations, which was sanctioned by the last Annual General Meeting, has been distributed throughout the country; and that District Committees are forming in different parts, with the certainty of their being ultimately very advantageous. In Staffordshire, for instance, not only have the Regulations, recommended for securing the necessary intercourse with the Metropolitan Committee, been carried into effect with zeal and promptitude, but a most beneficial measure has resulted, a Medical and Surgical Library has been established, for the use of the Members of the Association, who reside in that district, of which Wolverhampton may be considered the centre. The Committee hopes to see this excellent mode of inducing medical men thus to associate with each other, acted upon in other districts, as it cannot fail to promote useful discussion, and extend professional knowledge.

The Committee must here express the satisfaction it feels at the great exertions which have been made by the Society of Apothecaries, in carrying into active operation the powers intrusted to them by the Legislature. In the before-mentioned County of Stafford, a resolute stand has been made against empiricism, and the Committee learns with satisfaction, that there are other cases still pending, which will serve to show the energy evinced by the Society of Apothecaries, in protecting the just rights of the legalized Medical Practitioner; in a very short time, these circumstances will become more manifest, as the many obstacles by which the operations of that act have been too frequently impeded and evaded, will be done away.

The rejection of the Surgeons' Act in the late Session of Parliament, at the same time that it must have disgusted the Royal College of Surgeons, by the very unfair, and even unjust manner, in which it was opposed and thrown out, has had the unhappy effect of showing more clearly to irregular practitioners, how little power the Royal College of Surgeons possesses over those who practise surgery in this country.

Under these circumstances, although the practice has been hereby left in a much worse state than before, yet the Association cannot expect that the Royal College of Surgeons will apply to Parliament again for some time to come; and, therefore, the committee has most anxiously sought for some new channel, through which it may obtain, for society, a proper guarantee, that ignorant persons shall be prevented, by a positive law, from the practice of surgery, and more especially of midwifery; but it has hitherto sought in vain, indeed, as your Committee has been led to conclude, that the desired legal enactments have not been obtained, only because neither the Public nor the Houses of Parliament are yet sufficiently aware of the necessity of the measure, it has of course, for the present, abandoned every idea of recommending this Association to go before Parliament, with a Bill for amending the Practice of Surgery and Midwifery; but has principally turned its thoughts towards the best mode of laying before the Public, such proofs of the evils which necessarily result from the present system, as must render the necessity of Parliamentary influence abundantly manifest.

It is with great pleasure the Committee learns, that "a Series of Letters, addressed to the President of the Associated Apothecaries and Surgeon-Apothecaries of England and Wales, on the present state of the Practice of Physic and Surgery" has been published. The first Series is intended to give a comparative view of particular systems of Medica

Education, to consider the separation of Medicine from Surgery, to estimate the claims of the General Practitioner, and to propose a more respectable mode of remunerating his attendance. The Committee learns this with satisfaction, because it is sure that good will result from laying the present state of Medical Practice before the Public for their consideration in every possible manner.

That the Public are not fully sensible of the varied and precise knowledge which is required before any person can honourably, or even safely practise the art of medicine is perfectly clear, but that the higher classes of Society are even still more uninformed of the gross ignorance which pervades the mass of irregular Practitioners, has been forced upon the notice of the committee by abundant evidence. This is not, however, unnatural, for the higher classes have but little intercourse with medical men, except with Physicians, or with those general Practitioners whose varied and extensive knowledge, and whose medical acquirements constitute them Physicians in every thing but the name.

Urged by these considerations, the Committee has therefore to recommend, that it be an instruction to future Committees to bring the subject into general notice, by all possible means; that the country members be urged to collect, through the medium of the district Committees, such facts as may fairly display the mischief which results from uninformed Practitioners, and may supply a body of evidence ready to be adduced whenever the measure of petitioning is adopted; and especially that, early in the next session, a petition be presented to each House of Parliament, praying its interposition, and stating fully the grounds upon which the Association believes that some legislative enactment is absolutely necessary.

Upon the same principle also, of giving publicity to the claims and the present situation of the General Practitioner, the Committee further recommends the formation of some plan, by which the Members of the Association shall have an opportunity of vindicating their own respectability, and of marking, as perfectly as it may be done, the line between the scientific and the empirical Practitioner.

To do this the more perfectly, the Committee proposes, that an invitation be given to the Members of the Association, and indeed to all other members of the Medical Profession, to transmit to the Committee, for publication, some portions of that knowledge, which must have resulted from their extensive practice and abundant experience. In this way the Committee hopes to be enabled to publish, at short

intervals, volumes of Medical and Surgical Transactions, which will demonstrate how well the General Practitioner deserves the legal sanction which he claims for himself and for the public; and to stimulate him to improve himself further in the God-like art of relieving the countless miseries of a sick bed. The Committee feels that these are only silent labours, but it is, at the same time, convinced that the Association will gain its object as certainly and as quickly by such means, as if it endangered the existence of its small funds by taking more apparently active measures before the time arrives, when such measures may be attended with success.

In conclusion, the Committee cheerfully commits itself to the kind consideration of the Association, regretting only, that its ability to protect the community at large, and to benefit its own respected profession is so disproportionate to its wishes and its zeal.

The state of the Funds of the Association being reported by the Treasurers, viz. (See Page 327.)

The following Resolutions were then carried unanimously.

RESOLUTIONS.

Resolved, 1. That the Report now read be received and adopted.

Resolved—2. That a book be prepared and printed, containing the present Report, the Rules of this Association, and a List of the Members; which book may be obtained by any member who applies for it to the Secretary in any mode which will not subject the Association to expense.

Resolved—3. That the grateful acknowledgments of this Association be given to James Parkinson, Esq. for the great ability, the indefatigable attention, and unabated zeal, with which he has, during the last three years, conducted himself in the office of President, and that he be requested to continue in that situation.

This Meeting having heard, with unfeigned regret, the intention of James Parkinson, Esq. not to accept the office of President of the Association for the ensuing year, after having filled it for three successive years, in a manner which has called for, and obtained the thanks of this Association, it was

Resolved—4. That Joseph Hayes, Esq. be elected to the office of President of this Association, vice, James Parkinson, Esq. resigned.

Resolved—5. That Joseph Hayes and Arthur Tegart, Esq. be requested to accept the best thanks of the Association,

for their zealous services as Vice-Presidents during the last year.

Resolved—6. That the thanks of the Association be given to the Treasurers for their past services, and that their continuance in office be requested.

Resolved—7. That the thanks of this Association be given to the General Committee, for their very able Report, and for their great attention to the concerns of the Association.

Resolved—8. That the best thanks of the Association be presented to the Secretary, John Powel, Esq. for the readiness and ability with which he has fulfilled the greatly extended duties of his situation during the last year.

Resolved—9. That Arthur Tegart and C. T. Haden, Esqrs. be Vice-Presidents of this Association for the year ensuing.

No regular order having been observed in placing the names of the General Committee, but it being specified in article iv. section 5, that “half of each class shall go out every year by rotation, such members, nevertheless, being eligible for re-election.” The Committee, to avoid the difficulty which now presents itself, suggests that such gentlemen shall be fixed upon to go out, as favoured the Committee with their attendance during the last year the least frequently. This proposal having met with the approbation of the meeting, it was

Resolved—10. That the arrangements of the General Committee respecting the formation of Committees for the year ensuing be adopted.

The members of the Apothecaries’ Society who have attended least frequently, being—

R. S. Wells, Esq.	R. M. Kerrison, Esq.
M. Bowman, Esq.	John Cates, Esq.
C. Shillito, Esq.	T. Graham, Esq.

And the members who do not belong to the Apothecaries’ Society who have attended least frequently, being—

R. Ogle, Esq.	A. T. Thomson, Esq.
P. Fernandez, Esq.	Lewis Leese Esq.
R. James, Esq.	T. Rodd, Esq.

C. T. Haden being elected Vice-President, it was

Resolved—11. That

R. S. Wells, Esq.	Edward Brown, Esq.
Henry Field, Esq.	Thomas Parrot, Esq.
Jos. Hurlock, Esq.	Charles Shillito, Esq.

belonging to the Apothecaries’ Society, and that

James Parkinson, Esq.	Nodes Dickenson, Esq.
Thomas Alcock, Esq.	Robert James, Esq.
George R. Rodd, Esq.	Lewis Leese, Esq.

Thomas Morrah, Esq.

Non-members of the Apothecaries' Society, be elected to fill the vacancies of the General Committee for the year ensuing.

Resolved—12. That the day of the Annual Meeting and Anniversary Dinner be changed to the first Wednesday in July; the hour of meeting to be *three* o'clock, instead of *two*; and that of the *dinner* to be *six* o'clock, instead of *five*.

Resolved—13. That the General Meeting most earnestly recommend to the members of this Association who reside in the country, the imitation of the Staffordshire District Committees, in the establishment of Medical and Surgical Libraries, in such central situations as may appear most likely to be beneficial to the members resident in such districts.

Resolved—14. That the General Meeting feel themselves called upon to express very strongly the grateful sense they entertain of the benefits which have resulted to the public, and to the medical profession, from the zealous and active exertions that have been made by the Society of Apothecaries, in carrying the Apothecaries' Act into efficient operation.

Resolved—15. That the General Meeting do recommend to the General Committee, to take into their consideration, at a future Meeting, the present mode employed by the Chymists and Druggists, of acting as Apothecaries, and even visiting patients, under the supposed sanction of Clause 28, (*vid. Apothecaries' Act*) in opposition both to the spirit and principle of that Act, passed in the year 1815, for the regulation of the Practice of Apothecaries, &c. &c.

Resolved—16. That the attention of the Committee be directed to the propriety of presenting a petition to each House of Parliament, to take into their most serious consideration the deplorable manner in which the health and lives of the community are hazarded, by the want of a proper legal control over illiterate and unqualified persons practising Surgery and Midwifery.

Resolved—17. That the members resident in the country be urged to collect, through the medium of District Committees, such facts as may more fully display the mischiefs which result from the practice of uninformed and ignorant persons, and may supply a body of evidence, ready to be adduced whenever a new application shall be made to Parliament.

Resolved—18. That the Committee be directed to take the necessary measures for inviting the members of the Association, and all other members of the Medical Profession, to transmit to them papers on medical and surgical subjects.

for publication, in occasional volumes, to be entitled, "Transactions of the Associated Apothecaries and Surgeon-Apothecaries of England and Wales;" or such other title as the Committee may hereafter approve.

Resolved—19. That the Editors of the London Medical Repository, and London Medico-Chirurgical Review, be respectfully requested to insert the Report, &c. now adopted, in their respectful valuable publications.

Resolved—20. That the General Committee be directed to lay the objects of the Association before the public in all possible ways.

JOSEPH HAYES, *President.*

June 21, 1820.

F U N D S.

Statement of Account, from July 21, 1819, to June 21, 1820.

1819.	<i>Dr.</i>	<i>l.</i>	<i>s.</i>	<i>d.</i>
July 23.	To Mr. Powell, the Secretary, for Sundries and Salary to June 24, 1819 - - - - -	37	6	0
Dec. 20.	For Advertisements - - - - -	16	19	6
	Sundries to Mr. Parkinson, audited July 21, 1819, but not drawn - - - - -	3	12	6
1820.				
June 21.	To Mr. Powell, for Sundries and Advertisements to June 21, 1820, - - - - -	13	0	3
		<i>l.</i>	<i>70</i>	<i>18 3</i>

1819.	<i>Cr.</i>	<i>l.</i>	<i>s.</i>	<i>d.</i>
	By Balance in the Bankers' Hands	124	6	0
1820.				
Feb. 19.	Subscriptions through J. Upton, Esq. - - -	23	2	0
June 14.	One Year's Dividend of 1.500 3 per Cents. - - -	15	0	0
June 21.	Subscriptions through Mr. Powell - - - - -	3	7	0
		<i>170</i>	<i>15</i>	<i>0</i>
		<i>70</i>	<i>18</i>	<i>3</i>
	Balance in Bankers' Hands	<i>l. 99</i>	<i>16</i>	<i>9</i>

3 per Cents. *l.* 500.

We have audited this Account and find it correct, June 21, 1820.

{ C. T. HADEN.
} E. LEESF.

Officers of the Associated Apothecaries and Surgeon-Apothecaries, &c. for the Year 1820.

PRESIDENT.—JOSEPH HAYES, Esq.

VICE-PRESIDENTS.—ARTHUR TEGART Esq.;

C. T. HADEN, Esq.;

Treasurers.—JAMES PARKINSON, Esq. ; JAMES UPTON Esq. ;
JOHN HUNTER, Esq.

GENERAL COMMITTEE.

Members who belong to the Society of Apothecaries.

James Upton, Esq. ; John Hunter, Esq. ; James Seaton, Esq. ; Walter Drew, Esq. ; Wentworth Malim, Esq. ; William Hillman, Esq. ; R. S. Wells, Esq. ; Henry Field Esq. ; Edward Browne, Esq. ; Joseph Hurlock, Esq. ; Charles Shiletto, Esq. ; John Parrott, Esq.

Members who do not belong to the Society of Apothecaries.

William Acret, Esq. ; George Fincham, Esq. ; Thomas Hurst, Esq. ; Neville Wells, Esq. ; Edward Leese, Esq. ; Lewis Leese, Esq. ; James Parkinson, Esq. ; Nodes Dickenson, Esq. ; Thomas Alcock, Esq. ; George R. Rodd, Esq. ; R. James, Esq. ; Thomas Morrah, Esq.

Bankers.—Messrs. GOSLING and SHARP, Fleet-Street.

Secretary.—JOHN POWELL, 62 Newman-Street.

We are glad to see a proposition made by the Associated General practitioners for the publication of Periodical Transactions, after the example of other Societies. No body of men can possibly have the command of such ample materials for the construction of a work of this kind, as the Associated Apothecaries and Surgeon-Apothecaries of Great Britain. Their medical education is now perfectly adequate to the task of observing scientifically, and recording accurately, the phenomena of disease, the operation of remedies, and the disorganizations of structure, which come within the sphere of their practice. And as this class of the profession form the great numerical majority of it, and possess the exclusive opportunities of seeing daily the whole course of diseases, and the exact effects of the medicines employed, so they are in reality, the best qualified to collect the materials of our knowledge, and advance the progress of our science. The publication of an annual. or semi-annual volume of

Transactions, with a list of those who are legally qualified to practise, would not only make the members of this extensive body more known to each other, and to the public, but would constantly generate and cherish a zeal in the prosecution of medical investigations, and an increased attention to the phenomena of Nature, whether in health or disease. We think it highly probable, too, that literary and scientific enterprises of this kind, would have a strong tendency to harmonize the profession, inspire liberality of sentiment, check the selfish passions, and dissolve that *Odium Medicum*, which too often operates with such baleful influence on an otherwise enlightened order of society.

We shall here take the liberty of throwing out a few suggestions for the consideration of the Committee, on this subject.

As it is highly probable that materials for an annual volume, at least, will be readily supplied, as soon as the design is fully made known, we conceive, that economy might be ensured, and the possibility of risk avoided, by some such plan as the following:—We would recommend, that subscribers be solicited, on the condition that the work be delivered to them at prime cost, or a very little above that sum. Thus, suppose seven hundred subscribe, and one thousand copies of an octavo volume, of four hundred pages, be printed. The paper and printing of the volume, if properly managed, and no plates introduced, should not cost more than one hundred and thirty pounds; and allowing that this sum, together with the expense of boarding the work, be laid upon the seven hundred subscribers, the price of each volume will be about four shillings and sixpence, which is not more than half the sum they would otherwise pay for a similar volume. There would then be three hundred copies left for the public demand, the money resulting from which might be appropriated as was thought most advisable by the Committee.

II.

Observations on the relative Powers of the Heart and Vessels in the Support of the Circulation of the Blood. By C. E. LUCAS, M. D. of Hatfield.

THE fact of the pulse not being accompanied by any general dilatation of the arteries, in the ordinary state of the circulation, may, I hope, now be taken for granted: as the evidence

adduced in Dr. Parry's work on the Arterial Pulse, with that of others referred to in your article on this subject, at page 201, vol. ii. of your Journal, is so conclusive, that as you say, "it is hardly credible that any man can continue to support the old doctrine, (of alternate dilatation and contraction) who is at all open to the evidence of truth."

It must be, I think, equally clear, that if the blood projected into the aorta by the systole of the heart, dilated that vessel altogether, it could not be propelled forward; for certainly, if the dilatation were equal to the projected quantity, there could be no propulsion, until, by the subsequent contraction, the artery had recovered its usual diameter, when an equal quantity would be displaced; thus the blood would be in alternate motion and rest, and the same effect would be produced upon the circulation, as if a directly contrary mechanism were employed, and the blood were driven by the successive shocks of the heart through tubes incapable of motion. That this is contrary to the fact, we have, I think, indubitable evidence in the case of divided arteries, where the blood is projected in a stream, though alternately to greater distances during the systole of the heart. On the other hand, the denial of *all* dilatation of the aorta consequent to the impulse of the heart, leads inevitably to the same conclusion, of alternate motion and rest of the blood; and Dr. C. Parry is forced to confess, that your reasoning in support of this opinion, "is so consequent," that he "can find no reply but in the opposite matter of fact, and in the supposition that the data themselves are erroneous." This supposition will, I have no doubt, be found true; and to remove the difficulty, it will be only necessary to admit, that the root of the aorta does undergo a *partial* dilatation; as thus, suppose that two ounces of blood are thrust into the aorta at each systole of the heart, and that one ounce and a half of this be propelled along the vessel, but that the root of the aorta, yielding in part to the distending force, may be dilated in its diameter to the extent of the remaining half ounce. During the diastole of the ventricle, the artery will contract upon this blood, and force it necessarily both ways, thereby at once closing the valves, and continuing the progressive motion of the column before, though with diminished impulse, until the vessel has regained its usual diameter, when the systole of the heart will occur.

Dr. Parry himself does not deny that this may take place, expressly saying—

"With regard to the expansion of the root of the aorta, I have already admitted, in a former work, that I have nothing to say in

point of fact." And then adds, "it should seem that the muscular fibres which thinly supply that part, (but which he denies to the other parts of the arteries) are intended as a provision against somewhat of that kind, which may, at least, casually occur. If, however, this be admitted, it is no argument for a similar change in other parts of the system."

We know that during the contraction of the right auricle the venæ cavæ suffer a dilatation equal to the temporary pressure of blood upon them; may we not therefore conclude, that a similar state of the root of the aorta takes place, from the same cause, under the unyielding state of the arteries generally, thereby giving effect to the valvular apparatus there placed, and providing effectually for the support of a continued flow of the blood. But although the root of the aorta may yield to the distending forces, before stated, the parts beyond it will suffer no dilatation; for in vessels, the aggregate of whose areas is constantly enlarging, and where the momentum must of course be diminishing with the declining velocity, in the same proportion, a moderate resistance of their coats will so far counteract the force of the heart, as to prevent all dilatation. But even the alternation of impulse derived from the heart, will also finally disappear in the minute ramifications of the capillaries, from the resistance of vessels and their numerous anastomoses, the increase of their collective areas, and the demand made upon their circulating fluids by the various secretions and excretions; thus converting the arterial current into a smooth continuous stream. If, therefore, we find all inequality of impulse removed from the blood, before it is applied to its final purposes in the system; must we not, *à fortiori*, conclude, that a state of alternate motion and quiescence would be wholly incompatible with the due performance of those functions?

Without some provision for a continued flow of the blood, independent of the heart, the most disastrous results must follow. Any suspension of the action of the heart, would be followed by that of the circulation; and by the removal of the power by which the blood is gradually accumulated on the right side of the heart, the most powerful stimulus to the renewal of its action would be lost; and thus a temporary suspension would terminate in a final extinction of its action. The balance of the arterial and venous systems, the loss of which, under disease, has been so beautifully illustrated by Dr. Armstrong, could not be maintained; indeed, every important function of the arteries, both in health and disease, seems connected with their possessing an independent power of action. These observations will not apply so much to

those supposed cases of alternate motion and quiescence of the blood, dependent on alternate dilatation and contraction of the arteries, because here the contraction of the vessels might be supposed to be continued, after the dilatation from the returning systole of the heart had ceased; but where, on the contrary, the blood is supposed to be quiescent in the vessels during the diastole of the ventricle, it does not appear how the circulation can be carried on after the heart has ceased to act, the last act of that organ leaving the ventricles in the state of diastole.

If ever the arteries take on a state of alternate dilatation and contraction, corresponding with the pulse, we might expect it to happen when the volume of blood is reduced by great, and especially by sudden evacuations. Here the usual state of forced distention in which the arteries are found during health, being removed, they might yield to the distending force of the blood from the ventricle, which would then be propelled to the extremity of its course, by a series of successive contractions. The full, soft, undulating pulse, where wave seemed to succeed to wave, as well as the peculiar jerk met with in these cases, would give the idea of the vessel under the finger being alternately in a state of dilatation and contraction; yet this was not observed to be the case by Dr. Parry in two ewes, killed by repeated bleedings, where the diameter of the carotid is reported as progressively decreasing, until immediately before death, when it recovered again a little in one instance: but, to ascertain this point satisfactorily, it would be necessary to institute a more extended series of experiments. At all events, we may conclude, that no dilatation of the arteries can take place, until the usual relation between the power of the heart and the resistance of their coats has been destroyed, by giving a preponderance to the former; neither would this invalidate the general subserviency of the contractile powers of the arteries to the support of the circulation; and we thus acquire a more extended view of the resources of Nature, and of the wisdom of that provision, which has not contrasted the maintenance of the circulation to the powers of the heart alone, however greatly endowed, but has made every part of the vascular system conducive to the same great end.

C. E. LUCAS, M. D.

Hatfield, May 18, 1820

LECTURES, &c.

Medical Botany. Botany being now so essential a part of the Medical Gentleman's Education, we are gratified to find men of talent and experience engaged in conveying the necessary knowledge through the medium of Lectures, as well as printed works. Among the Lectures on Botany, we beg leave to draw the attention of the medical student to those of Dr. Emerson, who facilitates the study by arranging the matter under the following five heads; viz.

1. Of the parts of fructification, on which generic character is founded.

2. Illustration of the Linnæan system.

3. Of the anatomy and physiology of plants.

4. Of the elements, and immediate principles of vegetables.

5. Of the natural orders, and of the medicinal plants included in them.

In this part of the Course, the *analogy* between the *forms* and *properties* of plants is explained, agreeably to the latest discoveries of scientific Botanists. These Lectures also form a principal feature in the Autumnal and Winter Courses of *Materia Medica*. It is Dr. Emerson's intention to publish a text-book in the course of a short time.

Mr. DAVIES, Member of the Royal College of Surgeons, Surgeon in the Army, Surgeon to the Household of his Royal Highness the Duke of Cumberland, and Surgeon-Man-Midwife to several Lying-In Charities, &c. &c. will commence his Autumn Course of Lectures on the Theory and Practice of Midwifery, and on the Diseases of Women and Children, in the Waiting Room of the Royal Westminster Infirmary for Diseases of the Eyes, Marylebone-street, Piccadilly, on Tuesday October 3d, at a quarter past Ten o'clock in the Morning.—Medical Officers of the Navy, the Army, and the Ordnance, will be admitted to attend these Lectures, on presenting a recommendation from the heads of their respective departments to Mr. Davies, at his house, on Monday, Wednesday, or Friday mornings, before eleven o'clock.

Royal Dispensary for Diseases of the Ear, Dean-Street. Mr. CURTIS will commence his next course of Lectures on the Anatomy, Physiology, and Pathology of the Ear, and on the Medical Treatment of the Deaf and Dumb, on Monday, October the 2d. For particulars apply to Mr. C. at his house, No. 2 Soho-Square.

St. George's Medical, Surgical, and Chymical School. The Courses of Lectures will commence the first week of October. *Namely.* 1. On the *Laws of the Animal Economy and Practice of*

Physic; by GEORGE PEARSON, M. D. F. R. S. Senior Physician to St. George's Hospital, &c. &c.—2. On Therapeutics, with *Materia Medica*; by GEORGE PEARSON, M. D., &c.—3. On Chymistry, at the Royal Institution Laboratory; by W. T. BRANDE, Professor R. I. and Sec. R. S. &c. &c.—4. On the Principles and Practice of Surgery; by B. C. BRODIE, F. R. S.; Assistant-Surgeon to St. George's Hospital, &c. &c.

Note. SIR EVERARD HOME will deliver Lectures on Surgery to the pupils of St. George's Hospital.

Middlesex Hospital. The Medical Lectures will commence on Monday the 9th of October. Theory and Practice of Physic, by Dr. Southey, on Mondays, Wednesdays, and Fridays, at nine in the morning; Chymistry, by Dr. Ashburner, on Tuesdays, Thursdays, and Saturdays, at nine in the morning; *Materia Medica*, by Dr. Southey and Dr. Ashburner, on Tuesdays and Saturdays, at eight in the morning; Midwifery, and the Diseases of Women and Children, by Dr. Merriman and Dr. Ley, every morning, at half past ten.—Further particulars may be learnt, on application to Mr. Bid-
del, Apothecary at the Hospital.

Theatre of Anatomy, Great Windmill Street. The Lectures on Anatomy, Physiology, Pathology, and Surgery, by Mr. WILSON, and Mr. CHARLES BELL, Surgeon to the Middlesex Hospital, will commence on Monday, Oct. 2, at two o'clock. The Demonstrations in the rooms will be given by Mr. SHAW, who will assist the Students during the morning.

☞ Mr. Shaw will this Season take a House Pupil.

Dr. JOHNSON's little Work "on Civic Life, Sedentary Habits, and Intellectual Refinement," has been republished in Philadelphia.

On the 1st of October will be published, *Outlines of Midwifery*, developing its Principles and Practice; with illustrative Lithographic Engravings, in 1 Vol. 12mo. Principally designed for Students. By J. T. CONQUEST, M. D. F. L. S., &c.

IN THE PRESS.

A Dissertation on the Treatment of Local Affections of Nerves: to which the Jacksonian Prize of the College of Surgeons was adjudged. By JOSEPH SWAN, Esq. Surgeon to the Lincoln County Hospital.

Essays on the Employment of Caustic. By W. J. HIGGINBOTTOM, Surgeon, in Nottingham.

Books received for Review since last Quarter.

A Dissertation on Infanticide, in its Relations to Physiology and Jurisprudence. By WILLIAM HUTCHINSON, M. D. F. L. S. Octavo, pp. 99. London, 1820.

A short Account of some of the principal Hospitals of France, Italy, Switzerland, and the Netherlands; with Remarks upon the Climate and Diseases of those Countries. By H. W. CARTER, M. D. F. R. S. Ed.; one of Dr. Radcliffe's Travelling Fellows from the University of Oxford. Octavo, pp. 255. London, 1819.

Memoire sur l'Utilité des Pièces d'Anatomie Artificielle Chirurgicale. Par J. F. AMELINE, &c. &c. &c. Professeur d'Anatomie a Caen, &c. 1 Vol. Octavo, pp. 89. Paris, 1819.

Reflexions Critiques sur un Ecrit de M. Chomel, ayant pour Titre: "de l'Existence des Fièvres." Par TH. DUCAMP, M. D. &c. &c. 1 Vol. Octavo, pp. 82. Paris, 1820.

☞ *An able defence of the doctrine of Broussais, with some judicious modifications of that distinguished physician's theory of fever.*

Practical Essays on Strictures of the Urethra, and Diseases of the Testicles, including Observations on Fistula in Perinæo and Hydrocele. Illustrated by numerous Cases, and an Engraving; and prefaced with some Remarks on Life and Organization. By ROBERT BINGHAM, Fellow of the Royal College of Surgeons. 1 Volume, Octavo, pp. 357, with a Plate. London, 1820.

A Treatise on Inflammation of the Mucous Membrane of the Lungs; to which is prefixed, an Experimental Inquiry respecting the Contractile power of the Blood-Vessels, and the Nature of Inflammation. By CHARLES HASTINGS, M. D. Physician to the Worcester Infirmary; late President of the Royal Medical Society, Edinburgh, &c. 1 Vol. Octavo, pp. 420. London, 1820.

Advice and Maxims for Young Students and Practitioners of Medicine; with Remarks on the Pulse. By DANIEL JOHNSON. Octavo, sewed, pp. 32. London, 1820.

☞ *This little pamphlet contains much good advice, and many ingenious observations.*

General Principles of Psycho-Physiology. By EDWARD SMITH PEARSON. Octavo, pp. 62. London 1820.

☞ *An ingenious and laudable attempt to prove the immateriality of mind, even on physiological principles.*

Proposal for establishing, in Edinburgh and other Towns, a Newly Improved Apparatus for the Application of the Vapour of Water, Sulphur, and other Medicinal Substances, found so efficacious in the Cure of Rheumatism, and diseases of the Skin; with a Paper upon the Subject, which has been submitted to the perusal, and received the approbation of Dr. Hamilton, Sen. Dr. Gregory, Dr. Barclay.

Dr. Farquharson, and Mr. Bryce. By WILLIAM SCOTT, Esq. Octavo, sewed, pp. 56. Edinburgh, 1820.

☞ This is the first number of a work which is designed to be published, not exactly periodically; but as materials may accumulate or present themselves. The establishment for vapour baths in Edinburgh, has been got up under the direction of Mr. Scott, and, we are informed, is patronized by the faculty, and likely to be generally encouraged by the public at large. In the pamphlet, herewith announced, Mr. Scott has traced the origin and importance of baths from Hippocrates downwards; and gives numerous extracts from, or rather an analysis of Dr. De Carro's work "Sur les Fumigations Sulfureuses," lately published in Vienna. The pamphlet contains many judicious and original observations besides, and is deserving of the reader's attention. The Institution itself is, we conceive, entitled to the grateful patronage of all classes in the Scottish metropolis.

* * A few Medical Students will be received as Boarders at the Establishment in Drummond-Street.

Revue Medicale, Historique et Philosophique. No. III. for May, 1820.

☞ This work, consisting of about 170 pages each number, is published every two months, containing extensive reviews of medical works, French and foreign. It is somewhat on the plan of our own Journal; but more addicted to criticism than analysis, a characteristic feature of the French journals in general. It is not, therefore, so useful to the English reader as it otherwise would be, did it adopt the analytical course; yet still it is by far the best Review published in Paris, and as such we can recommend it to our brethren. Extracts from the work will regularly appear in our Journal.

Cases of Hydrophobia. By GEORGE PINCKARD, M. D. Octavo, sewed, pp. 38. London, 1819.

A Synopsis of the various kinds of Difficult Parturition, with Practical Remarks on the Management of Labours. By SAMUEL MERRIMAN, M. D. F. L. S. Lecturer on Midwifery; Physician-Accoucheur to the Middlesex Hospital, and to the Parochial Infirmary of St. George's, Hanover Square; and Consulting Physician-Accoucheur to the Westminster General Dispensary. Third Edition, with considerable Additions; and an Appendix of Illustrative Cases and Tables. 1 Vol. Octavo, pp. 324, and five Plates. London, 1820.

A Treatise on Verminous Diseases, preceded by the Natural History of Intestinal Worms, and their Origin in the Human Body. Translated from the Italian of VALERIAN LEWIS BRERA, Professor of Clinical Medicine in the University of Pavia. By JOHN G. COFFIN, M. D. of Boston in America. 1 Vol. Octavo, pp. 363, with Plates. Boston, 1817.

☞ We return Dr. Coffin many thanks for this very valuable volume, which we shall take an early opportunity of fully analyzing for the benefit

of the British medical public; as there is no work on the subject of Intestinal Worms and Verminous Diseases, in our language, at all to be compared with it for science and utility.

Discourses on Cold and Warm Bathing; with Remarks on the Effects of drinking Cold Water in Warm Weather. By JOHN G. COFFIN, M. D. of Boston, United States, 8vo. pp. 75. Boston, 1818.

☞ *These discourses contain many excellent observations on bathing, that cannot be too generally known by all classes of society.*

A Toxicological Chart; in which is exhibited, at one View, the Symptoms, Treatment, and Modes of detecting the various Poisons, Mineral, Vegetable, and Animal, according to the latest Experiments and Observations. [Most respectfully dedicated to the Royal Humane Society.] By a Member of the Royal College of Surgeons, London. Two Sheets, Price 1s. 6d.; or on Pasteboard, 2s. 6d. London, 1820.

☞ *The readers of our Quarterly Series will remember that we suggested a Chart of this kind in our fourth number. That suggestion led to the present attempt; and, although some slight objections might be made to certain passages in the column of tests, (a fruitful source of disputation by the by) yet we consider the Chart as very fairly executed, according to our present state of knowledge on the subject, as published in professed to icological writings. We have placed the Chart in our own library, and we think no medical practitioner should be without it. It should also be hung up in the shops of all chymists and druggists, as well as in the surgeries of general practitioners. It is not to save chymical or toxicological study, but to prevent a moment's delay, when every moment is precious, and the life of a fellow-creature at stake.*

An Essay on Mercury; wherein are presented Formulæ for some Preparations of this Metal, including Practical Remarks on the safest and most effectual Method of Administering them, for the Cure of Liver Complaints, Dropsies, Syphilis, and other formidable Diseases incident to the Human Frame; being the result of long experience and diligent observation. By DAVID DAVIES, M. D. Member of the Royal College of Physicians and Surgeons, London; and Senior Physician to St. Peter's Hospital, Bristol. Octavo. sewed, pp. 35. 1820.

Observations on Variolous Inoculation and Vaccination; in a Letter to a Friend. With an Appendix, containing some Remarks on the Extension of the Small-pox, in the town of Melksham and its Vicinity. By J. F. HULBERT, Member of the Royal College of Surgeons, London, &c. &c. Octavo, sewed, pp. 53. London. 1820.

☞ *A well-written eulogium on vaccination, and a dignified remonstrance against the practice of variolation.*

Vol. I. No. 2.

2 X

Popular observations on Regimen and Diet; in which the Nature and Quantities of our common Food are pointed out and explained; together with Practical Rules and Regulations in regard to Health, adapted to various Situations and Circumstances, from Infancy to Old Age. By JOHN TWEED, Surgeon, &c. Bocking, Essex. 1 Vol. Octavo, pp. 248. London, 1820.

☞ *The title page fully explains the nature and design of the work, which enters more minutely into the detail of regimen and diet, and in a more profitable manner for the popular reader, than any other work of this class. To use the author's own words—"the valetudinarian will find in it rules which promote his recovery; and he who enjoys good health may learn to preserve it."*

Dissertatio Medica Inauguralis Quædam de Physiologia et Effectibus Electricitatis Orientia, complectens. Per FRANCISCUM MORAN, M. D. Hibernum. 8vo. pp. 25, Ed. 1820.

☞ *A well-written, and practical little Thesis, which is creditable to its author.*

Medical School, St. Bartholomew's Hospital. The following Courses of Lectures will be commenced at this Hospital, on Monday, October the 2d, at two o'clock. On the Theory and Practice of Medicine, by Dr. Hue; on Anatomy and Physiology, by Mr. Abernethy; on the Theory and Practice of Surgery, by Mr. Abernethy; on Chymistry and Materia Medica, by Dr. Hue; on Midwifery, by Dr. Gooch; Practical Anatomy, with Demonstrations, by Mr. Stanley.—Further particulars may be obtained, by application to Mr. Wheeler, Apothecary to the Hospital; or, of Mr. Anderson, Medical Bookseller, 40, West Smithfield.

Mr. EDWARD GRAINGER, jun. will commence his Autumn Course of Lectures on Anatomy and Physiology, on Tuesday, the 3d of October, 1820, at twelve o'clock, at his Rooms, 13, St. Saviour's Churchyard, Southwark. The Lectures will afterward be delivered daily, at eleven o'clock. Terms: Lectures and Dissections, single Course, 3l. 3s.; Perpetual, 10l. 10s.—Three Courses are given in the Year, beginning in October, January, and June. A few gentlemen are received as House Pupils.

Preparing for publication, A concise System of Anatomy, for the Use of Medical Students; by EDWARD GRAINGER, Junior. Member of the Royal College of Surgeons, and Lecturer on Anatomy and Physiology.

LECTURES on the Principles and Practice of Midwifery, on the Diseases of Women and Children, and on some Points of Medical Jurisprudence. By JOHN T. CONQUEST, M. D. F. L. S. Member of the Royal College of Physicians of London, and Physician-Accoucheur to the City of London Lying-in Institution.—Pupils, when properly qualified, will be supplied with several Cases of Labour gratuitously.—Terms: One Course, 3l. 3s.; Two Courses, paid for at once, 5l. 5s.; Perpetual, 8l. 3s.; Private Course to One Pupil, 10l. 10s.—Gentlemen who are Assistants, and Apprentices

or the Sons of Medical Men, become perpetual on paying 5l. 5s.—Four Courses are given in the Year, commencing on the First Monday in October and January, at a quarter past five o'clock in the evening; and on the first Monday in April and July, at a quarter past eight o'clock in the morning. Further particulars may be known of Dr. Conquest, at his house, No. 4, Aldermanbury Postern, where the Lectures are delivered.

To Lecturers, Authors, &c. &c.

As all Miscellaneous Notices in this Journal are printed beyond the Limits of the Review, and consequently at the Editor's own expense; and, moreover, as Government charges every Announcement of Lectures as an Advertisement, it is hereby signified, that no Announcement of Lectures will, in future, be received, unless accompanied by *Seven Shillings*; and if they exceed Ten Lines, One Shilling on each Line beyond that Space.

The Medico-Chirurgical Review, and Journal of Medical Science, offers the following facilities for Advertising; viz. 7 Lines and under, 7s.—Fourth of a Page, 10s. 6d.—Half a Page, 18s.—Three-Fourths of a Page, 25s.—One Page, 30s.—Bills, Catalogues, &c. stitched in (1250) 24s. 6d.—Bills or Catalogues (1250 in No.) to be sent to Mr. Sanders, Little Shire Lane, Temple Bar.—All Advertisements and Bills must be sent eight days before publication days, which are as follow, viz. on the 1st of March, 1st of June, 1st of September, and 1st of December.

Our Readers will perceive that we have exceeded the regular boundaries of the Journal, this Quarter, by twenty pages, besides printing a portion of the work in small type. The press of important articles prevented us inserting a very long "Supplemental Review," which will appear in our next without fail.

All the periodical *Transactions*, published in this Country, will be regularly and minutely analyzed in this Review: two gentlemen of distinguished talents and rigid impartiality, having undertaken that particular branch of the work, so as to effect the object in the fullest manner, and without any precipitation or negligence.

ERRATA.

Page 186, line from bottom 18, for *Aq. Menth.* read *one drachm*, read *one ounce*.
 228, line from top 15, for *6 1/2* read *6 1/4*.

J. V. SEAMAN, 296 Pearl-Street, New-York,
has for sale an extensive variety of works on
Medicine, Surgery, Chymistry, Botany, &c.
among which are the following valuable Fo-
reign Medical Publications:—

- OUTLINES** of the Anatomy of the Human Body, by Alex. Monro, Jr. 4 vols. 8vo. with Plates.
- MURRAY'S** System of Chymistry, 4 vols. 8vo. Fourth Ed. with Plates.
- THOMPSON'S** Historical Sketch of the Small-Pox, 8vo.
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- CLUTTERBUCK** on Epidemic Fever.
- BINGHAM** on Strictures of the Urethra.
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- TRANSACTIONS** of the Association of Fellows and Licentiates of King's and Queen's College of Physicians in Ireland, 3 vols. 8vo.



Preface.

VOL. I. No. 3. DECEMBER, 1820.

TO SUBSCRIBERS.

THE Editor begs to solicit the attention of Subscribers to the following subject :—

The immense issue of medical works from the press of this country, (as may be seen by the list of books transmitted for review,) together with the journals and other works, which are now regularly received from Europe and America, by the Editor, render it absolutely impossible for him to have justice done to the current of medical literature, without the occasional indulgence of a *supplement*, consisting of two or three sheets, to be charged at the rate of *sixpence for every 16 pages*, the common ratio of the monthly journals.

With this latitude, the Editor is confident that he shall be able to render an essential benefit to his brethren in this country, the colonies, and the public services, who cannot have access to the various works and journals, now regularly transmitted from abroad to this Review.

The Editor submits this Number of the Journal for the special examination of Subscribers, under the conviction that, on a candid review of its contents, they will acknowledge the additional 1s. 6d. to be amply compensated for in additional and valuable matter. He pledges himself, that the supplemental review shall never exceed, in price, however it may in pages, the limits here drawn, and that it shall always be dispensed with, whenever the original boundary of the Journal can be made to comprehend a quantum of analyses proportioned to the works received :—the object being rather to fix and record those portions of the passing stream of science which will best bear reiterated perusal and study, than to spread before the reader a great variety of entertainment.

As for the execution of the Journal, the Editor can safely assure the public, that he has *unlimited assistance*, at all times, from a select circle of friends, with whose talents, probity, and experience, he is personally acquainted. No pains shall be spared, on his part, to embody their united exertions in the collection and diffusion of useful knowledge, and indeed, the present Number may bear witness to the *variety of talent*

which has been efficiently combined in its construction. This feature will be still more conspicuous in every future Number.

The Editor has the pleasure of informing Subscribers and Authors, that the eclectic, or leading articles, the Supplemental Reviews, and all the principal Analyses of this Journal are now regularly republished in America; while extracts from many of them are diffused through the Continental Periodicals. It must surely be gratifying to Authors to know that *full accounts* of their productions are now read, not only wherever this Journal travels, but that, by branching into new channels, in various countries, they continue to be circulated to an almost inconceivable extent. In reciprocity of intellectual commerce, this work will endeavour to collect into a focus, the prominent rays of science and useful knowledge, that beam from other and distant regions, thus alternately diffusing light by reflection, and receiving it in return.

“Un immense réseau,” says an eloquent foreign medical writer, “de communication entre tous les savans de l’Europe, et meme du nouveau-monde, entretient l’éveil des esprits, *repand les decouvertes comme l’éclair qui brille soudain à tous les yeux, etablit cette harmonie de sensibilité moral entre toutes les amis éclairés*; et les fait participer en meme temps aux pensées les unes des autres.”

Let any one contemplate the list of works (more than *thirty* in number) which have been received since last publication day, and say whether it is possible to give any satisfactory analysis of them, within narrower limits than those here assigned. And as the public seems to have sanctioned the *object* of an Analytical Review, so it is confidently hoped, that Subscribers will cherish the exertions of the conductors, by sanctioning that scope assumed in the present Number of the Journal, and without the *occasional* aid of which, their energies must be cramped, and their means of proving useful, considerably abridged. The determination of this question, however, shall be submitted to a generous and discerning public, and they will cheerfully abide by their decision.

☞ It is expected that a plate will, in general, accompany each No. of this Journal, an addition not usual in Reviews.

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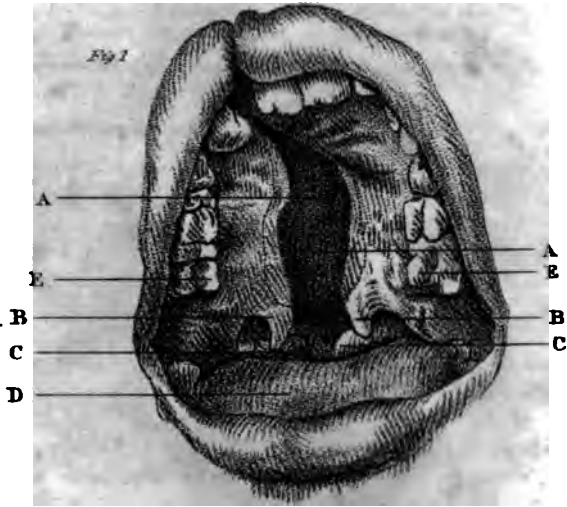
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Plan of the Congenital Division of the Palate



THE
Medico-Chirurgical Review,
AND
JOURNAL OF MEDICAL SCIENCE.

(*Analptical Series.*)

Nec tibi quid liceat sed quid fecisse decebit
Occurrat mentemque domat respectus honesti. CLAUD.

VOL. I.] DECEMBER 1, 1820. [No. 3.

MUCOUS MEMBRANE OF THE LUNGS.

I.

1. *A Treatise on Inflammation of the Mucous Membrane of the Lungs ; to which is prefixed an Experimental Inquiry respecting the Contractile Power of the Blood-vessels, and the Nature of Inflammation.* By CHARLES HASTINGS, M. D. Physician to the Worcester Infirmary, &c. One vol. 8vo. pp. 420. London, 1820.
2. *Histoire des Phlegmasies, ou Inflammations Chroniques, fondées sur de nouvelles Observations de Clinique, et d'Anatomie Pathologique.* Par F. J. V. BROUSSAIS, Docteur en Médecine, &c. &c. Two vols. 8vo. 1232 pages. Second Edition. Paris, 1816.
3. *Observations on the Inflammations of the Mucous Membranes of the Organs of Respiration.* By THOMAS ALCOCK, Esq. Surgeon. (Medical Intelligencer, Nos. 7 & 8.)
4. *Dictionnaire des Sciences Médicales.* Tome 32, Article "Membrane." Par L. R. VILLERME, M. D.
5. *An Essay towards a Pathology of Eruptive Fevers. Delivered as a Gulstonian Lecture, before the Royal College of Physicians, London, in the year 1820.* By RICHARD HARRISON, M. D. F. L. S. Fellow of the Royal College of Physicians, &c. &c. &c.

[London Med. and Phys. Journal, July, 1820.]

THE current of medical investigation and curiosity has lately set, with considerable force, towards the pathology of the Mucous Membranes—more especially those which line

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B

the aerial passages. This current of attention may appear to be too strong, and too exclusively directed towards a single point; but we believe that medical science is not likely to be retarded, in the end, by such accidents. A certain degree of enthusiasm seems necessary to ensure success in all pursuits: and it would be bad policy to repress it in a profession like ours, where there exists already so many circumstances to chill the zeal, damp the ardour, and exhaust the patience of those who devote their time and talent to the investigation of diseases.

It is now thirty years since Theophilus Bordeu, of Montpellier, published a volume on the "*Tissu Muqueux, ou l'Organe Cellulaire, et sur quelques Maladies de la Poitrine*;" but we confess that an attentive perusal of this work has furnished us with little knowledge on the subject. M. Pinel appears to have been the first who drew order out of chaos respecting the different tissues of the body; and Bichat, seizing the idea, carried his investigations (as far as anatomy and physiology are concerned) to the utmost extent; for very little has been added to the researches of this powerful genius. A slight anatomico-physiological sketch of the tissue which forms the subject of this article is indispensably necessary towards a pathological delineation.

The mucous membrane which lines the air passages of the lungs, and the whole alimentary canal, from the mouth to the anus, is composed of three tissues or structures—the chorion, papillæ, and epidermis. This membrane forms a kind of internal skin, and is strikingly analogous to the cutaneous surface, in its organization, functions, and vital properties. The chorion of the mucous membrane, which gives form and substance to this tissue, is of a soft and spongy texture, which Bichat conceived to be very much modified by its own secretions, as well as those foreign substances which constantly come in contact with it. It is curious that all the mucous surfaces, especially those of the stomach, have the property of coagulating milk, as is commonly seen in the process of making rennet with the paunches of animals. The papillæ or villi of the mucous membrane are so numerous and minute, that they generally appear as a polished surface, yet their existence is unquestionably proved. They are of a pyramidal shape, and very various in size, in different parts of the mucous tissue. The free or internal surface of this membrane is covered with an epidermis, analogous to that of the skin, but very fine, insensible, and apparently for the purpose of defending the chorion and papillæ from the rude action of passing substances. Throughout the whole extent of the mucous membrane, and embedded in the chorion, are

scattered innumerable glands, which secrete and pour out, by imperceptible orifices, a mucilaginous fluid, which lubricates their surface. These glands are very vascular, and doubtless are proportionally supplied with nerves. Whenever the mucous membrane is irritated the function of secretion is increased. The greatest degree of sensibility resides at the extremities of the mucous membranes, and any stimulus applied there excites the action of the mucous glands throughout the whole extent of tissue. This may account for many phenomena which we daily witness; thus the introduction of a suppository, or even a bougie into the rectum, will often excite the action of the whole intestinal tube. Bichat, instead of stimulating the cutaneous surface of a hemiplegic patient, has, more than once, pursued the following plan. He introduced a sound into the urethra, and a bougie into each nostril, while a surgeon irritated, at intervals, the uvula. The patients appeared to be much more roused by these means than by blisters to the skin. "Would it not be better (says Bichat) to produce an artificial catarrh in the mucous membrane of the nostril corresponding with an inflamed eye, than apply a vesicatory externally?"

As the mucous membranes are constantly exposed to the contact of substances extraneous to those of the animal, we may perhaps consider one office of them to be that of interposing a limit or barrier between our organs and those heterogeneous bodies—in short, officiating as a skin to the internal viscera. These mucous surfaces, when they happen to protrude without the body, as for instance, in *inversio uteri*, appear to take on the nature of common skin, in a great degree. In the impunity with which they may be exposed to the air, they exhibit a striking contrast with the serous membranes of the body. Into the structure of the mucous membranes a vast number of blood-vessels, nerves, exhalents, and absorbents are crowded, and no tissue in the human frame is endued with a higher degree of excitability, or irritability. Each mucous membrane, however, is specifically excited by a specific substance—as that of the bladder by urine, that of the lungs by air, &c. But when their organic sensibility is disturbed by disease, even their proper fluids will occasion pain, as we every day witness.

When we contemplate the great extent of the mucous surfaces, their importance, even as emunctories, which separate their fluids from the blood, rises in our consideration. Any excess or deficiency in their functions must, and evidently does, derange the general health in a very powerful manner. But their extensive chain of sympathies with almost every structure in the body, especially the skin, deserves the utmost

attention of the physician ; for it is principally in this way that we can trace the immense range of their influence on distant functions and structures of the human frame. In a future number we shall investigate exclusively the mucous membrane of the digestive apparatus, and then will be the proper time for taking up the subject of morbid sympathies. At present we confine our pathological researches and observations to the membrane lining the air passages.

Some physiologists believe that the mucous membrane of the lungs plays an important part in the change which is produced in the blood while passing through the pulmonary capillaries. The exhalation from the mucous tissue of the lungs is sufficiently obvious ; but whether the fluid exhaled be merely aqueous, or whether any of the mucous fluid can be converted into vapour at the temperature of the human body, is doubtful. Indeed we are far from being assured that the fluids which lubricate the palmonary surfaces in a state of health, are of that viscid nature which we observe them to be under other circumstances. It is, on the contrary, exceedingly probable that this viscosity prevents, in some measure, that change in the blood, usually effected by respiration, and in many cases, goes far by its tenacity and accumulation to prevent that change entirely, and thus destroy life. In perfect health there appears to be no expectoration—the fluid secreted being completely exhaled or absorbed.

It is remarked by Bichat, that where the mucous membranes take their origins from the skin, and where their animal sensibility is most exquisite, they are there supplied with nerves from the cerebrum ; as for instance, the pituitary membrane, the conjunctiva, &c. while the deep-seated portions of the mucous membranes are supplied chiefly by the ganglia, as the intestines, excretory ducts, &c. Although in health the air and aliments produce no sensation in the mucous tissues to which they are applied, excepting at the origins of these tissues, as above observed, yet when they are in a state of inflammation, the same substances produce much uneasiness ; and in this state a great quantity of first watery and then viscid mucus, or even pus, is poured out, as we see in pulmonary and vesical catarrh, dysentery, &c. There can be no doubt that this increased secretion is the means which nature employs for the removal of the irritation or inflammation, in the same way that a watery fluid is poured out from the serous membranes, to relieve their vascular turgescence. Yet an excess in either of these processes is attended with great danger. "No sooner does the secretion into the air passages exceed that which can be removed by

expectoration, than accumulation begins, and a part of the cells of the lungs, which should receive air, becomes filled with secreted fluid. This increasing must necessarily prevent the due performance of the function of respiration—that function without which life cannot exist. The blood no longer is changed from the dark or venous to the vermilion hue, and the colour of the body partakes of the leaden or livid shade;—if the accumulation proceed, respiration becomes more and more obstructed, the phlegm may be heard rattling in the air passages—and the patient sinks exhausted and suffocated.”*

It is known to our readers that, in this country, Dr. Harrison, Dr. Hastings, Mr. Alcock, and a few others, have recently drawn the attention of the profession to the pathological affinity of certain eruptive and other diseases with inflammation of the mucous membranes. This affinity has, for some years, been observed, and fully acknowledged on the continent.

“It is,” says Villermé, “to irritation of the mucous membranes, particularly those of the digestive organs, that we are to attribute a great many of the cutaneous phlegmasiæ, hitherto regarded as idiopathic affections. The miliary eruption appears to be always symptomatic. We invariably find, in individual cases, and in the histories of epidemic miliary fevers, that all the symptoms of irritation in the mucous membranes preceded the cutaneous eruption, and coincided with it. On dissection too, the physician has always found unequivocal traces of irritation and violent inflammation of some mucous membrane, falsely regarded as the *effect*, but evidently the *cause* of the miliary eruption. It is equally certain that in measles the mucous membranes are primarily affected, and that, from their tissue the irritation is reflected on the cutaneous surface:—in short, that the measles is only an epiphenomenon or appendix of the internal irritation. La Rougeole n’est qu’un appendice de l’irritation interne.” *Dict. des Sciences Med. Tom. 32, p. 218.*

In our review of Dr. Clark’s work, April, 1820. p. 587, we noticed the investigations of our continental brethren relative to the pathology of small-pox. All those who died of this disease at the “Maison des Enfants” (and the mortality was great) were examined, and the appearances were inflammation and ulceration of the internal coat of the intestines; with pustular eruptions there, and on the surface of the peritoneum. In three cases a croupy false membrane was found lining the whole alimentary canal, from the œsophagus to the rectum. Mr. Alcock, whose dissections showed the mu-

* Alcock.

cous membrane of the lungs more frequently affected, in variola, than that of the digestive organs, suspects that the French physicians did not examine the air passages. We have reason to know, however, that they left no important part of the body unexplored. But the difference between the climate of England and France, together with the heating regimen which, for a time, was employed in the MAISON DES ENFANS, will easily account for the mucous membrane of the lungs being the principal focus of disease in this country, while that of the digestive apparatus bore the onus of irritation in Paris.

Mr. Alcock, whose opportunities for prosecuting investigations of this kind are great, and whose originality of mind qualifies him for the task, observes that—

“In measles we trace the first appearances in the watery and suffused eyes—the discharge from the nostrils—the sneezing and other catarrhal symptoms, which show the inflammation of the mucous surfaces lining these parts: the inflammation extends inwards, and the throat becomes affected; as is evident, on inspection, and as might be inferred from the greater or less difficulty in swallowing. The sneezing is generally a mere precursory symptom, whilst the cough, which is at first generally slight, is often increased to a severe degree, showing the transition of the diseased action from one part of the mucous surface to another. In some cases these symptoms are much relieved on the appearance of the eruption, but in most of the severe forms of this disease it is otherwise, and the vulgar opinion that the greatest danger is to be apprehended as late as the decline of the eruption, or as is usually expressed, *at the turn*, seems not without foundation. If the disease have proceeded thus far without appropriate treatment—if there be much dyspnoea, and the cough be frequent and severe—if the breathing, besides being oppressed, be much increased in frequency beyond the natural standard, the result is indeed much to be feared.” *Med. Intell. Vol. I. p. 197.*

Mr. Alcock thinks that, during the progress of measles, we may as certainly infer the state of the lining membrane of the lungs, by a careful inspection of the fauces and adjacent parts, as we may infer the state of the stomach from that of the tongue.

“Examinations of morbid appearances, after death, in cases of measles, have shown the lining membrane of the air passages in a highly vascular and inflamed state; the air passages themselves filled in so large a proportion with mucus, as to prevent the oxydation of the blood, and consequently to destroy life. In cases where the disease has been more protracted, the air passages have not been filled with mucus, but chiefly with pus, sometimes mixed with air and mucus, extending throughout the most minute ramifications of the bronchia, and rendering a great part of the lungs much more dense than in the natural state.” *Med. Intell. p. 197.*

The parenchymatous structure of the lungs did not appear to suffer much, in Mr. Alcock's experience; but he has known more than one instance where ulceration of the larynx had taken place. During the period of eruption he not unfrequently found the larynx and pharynx principally affected, while, in the more advanced stages, the trachea, and still more frequently, the bronchia became the chief seat of disease. Mr. A. observes, that the greater number of these affections are acute, and require speedy and efficient means of relief; whereas inflammations of the same tissues, unconnected with these eruptive complaints, often continue for a considerable time without danger. Mr. Alcock, throwing all idea of the specific nature of measles (and indeed of other eruptive diseases) out of the question, and viewing the malady simply as inflammation of the mucous membrane of the lungs, founds his treatment, first on the controlling of the general excitement: and secondly, on subduing the local inflammation. The means of fulfilling these indications need not be stated to the readers of this journal.

In respect to small-pox, as was observed above, Mr. Alcock found the aerial much more frequently affected than the alimentary passages; and he states it as a general fact, "that the danger of small-pox has always been in the ratio of the laryngeal, tracheal, and bronchial inflammation, and that this inflammation has usually borne a strict relation to the apthous eruptions which are to be found in the throat."* A reference therefore to the state of the throat, in the early days of the eruption, has proved an almost unerring guide to Mr. Alcock, in his future practice. "In nearly all cases of confluent small-pox, when seen thus early, a decidedly depletory and antiphlogistic system of treatment has conquered the disease, and saved the person's life."

"So certainly has this treatment answered the intended purpose, that in many cases the disease has been cut short, the eruptions have

* Very many years ago Reil came to nearly the same conclusions. "Sur quinze ouvertures de sujets qui avaient succombé à variole, Reil a trouvé onze cas où les bronches étaient attaquées de phlegmasie, soit seules, soit conjointement avec le larynx, la trachée ou le poulmon; et tantôt elles contenaient un mucus de couleur pourpre foncée, ou du sang aqueux, ou une matière épaisse fétide et noirâtre; tantôt leur glandes étaient très gonflées quelquefois ces tuyaux ne présentaient qu'une légère phlogose avec des taches rouges; d'autres fois une fausse membrane plus ou moins épaisse, blanchâtre et tenace, recouvrait la tunique interne de tube arien très inflammée." *Dict. des Sciences Med. Vol. II. p. 130.* We cannot lay claim to any great novelty in our mucological doctrines of the present day, after the passages quoted in this article are fairly considered.

run through their course more rapidly than under ordinary circumstances, the secondary fever, as it has been called, has not occurred, and the person's countenance has been left free from pits, or the marks have been comparatively slight." *Med. Intell.* p. 201.

Dr. Hastings, of Worcester, whose work will presently come into particular consideration, relates two cases of fatal variola, where the mucous membrane of the lungs was inflamed or ulcerated. In the first case, (p. 238) a child, three years of age, after exposure to the contagion of small-pox, became feverish on the 14th of November. On the 17th a red pimply eruption appeared on several parts of the body. On the 19th there was some difficulty of breathing, which, next day, was increased, and he died the same evening. On dissection, the mucous membrane of the pharynx was found inflamed; while the trachea, bronchia, and air cells were quite filled with mucous and bloody serum. The membrane lining the trachea and bronchia was greatly inflamed; but the substance and pleural covering of the lungs were sound.

The brother of the foregoing, six years of age, was seized with variola, which proved fatal on the 6th day, and without any very evident pectoral symptoms. He complained, however, of soreness of the throat, and some fits of dyspnoea. On dissection, the pharynx and upper part of the glottis were found sphacelated. A quantity of bloody matter escaped from the trachea when incised. The mucous lining of the trachea and air cells was much inflamed; and about the middle of the trachea there were several small ulcers. The bronchia and air cells were completely full of a bloody fluid.

"It is common," says Dr. Hastings, "if death happen at an early stage, before the vesicles are formed, to find the trachea full of fluid, and the mucous membrane of the lungs exceedingly red from the dilatation of its capillary vessels. The glottis too, and the upper part of the trachea, are sometimes highly vascular, and the inflammatory action often extends to the pharynx; but neither the pleura nor the substance of the lungs appears inflamed. If the patient die at the later period of the disease, when the body is covered with pustules, ulcers are occasionally met with in the mucous membrane, corresponding in size with the pustules that are formed in the skin. The glottis and pharynx are still more affected than when the patient dies earlier, sphacelus of those parts occasionally occurring. The structure of the lungs is often entirely free from disease, and there are no adhesions. The lungs, however, do not collapse when the thorax is opened, and when cut into, a frothy matter escapes from them. The blood-vessels of the lungs are always much loaded." 185.

Mr Cross and Mr. Hull of Norwich have also stated some dissections after small-pox, where an eruption of a variolous

appearance was found on the inner surface of the stomach, as the reader will see in our last number, page 305.

In respect to hooping-cough, little doubt is now entertained of its being a specific inflammation, more or less acute, of the pulmonary mucous membranes—especially that portion lining the larynx.

“I have repeatedly ascertained,” says Mr. Alcock, “by dissections of patients who have died of hooping-cough, that the larynx invariably exhibited signs of inflammation often to great an extent as by its swelling to close mechanically the glottis;—often the exudation of coagulated lymph near the larynx; the mucous or lining membrane of the trachea and bronchia much increased in vascularity, and the cavities of the latter filled with fluid more or less mixed with air,—the fluid varying from that of thin mucus to perfectly-formed pus.

“With these facts as a basis, is it unreasonable to suppose that the inflammation of the mucous membrane lining the various parts of the organs of respiration, should produce the tenacious mucus, which is from time to time expectorated? that the accumulation of this matter impedes respiration, and acts as an extraneous body upon the larynx; that the cough is a mere natural effort to expel the offending matter, and its violence is in direct ratio with the tenacity of the phlegm secreted;—as we often find that spontaneous vomiting frequently terminates the paroxysm, by bringing away the secretion adhering about the top of the larynx, and which the cough had not been sufficient to dislodge? This irritating cause being removed, there is soon a cessation of all the urgent symptoms until its accumulation, or other accidental cause, produces the recurrence of the paroxysm. If the disease be not subdued, either by natural means or by appropriate remedial treatment, the excessive secretion continues, accumulation takes place in the bronchia and in the air cells of the lungs, and consequently the blood is prevented from that intimate contact with the air respired, which is so essential to life, that the continuance of this state terminates in suffocation.”—*Med. Intell.* p. 202.

The treatment, Mr. Alcock observes, must not be confined to the mere alleviation of symptoms, but must, to be successful, strike at the cause. When the inflammatory affection appears to call for measures beyond those of regimen, temperature, &c. “depletion, active depletion, must be used; and frequently the combination of blood-letting, both general and local, will afford more relief than either of them separately.” These means will be greatly assisted by such remedies as tend to equalize the circulation; the distribution of blood being generally in excess in the internal organs, and deficient on the surface. The occasional exhibition of emetics is therefore useful, “and still more particularly such

medicines as produce a copious mucous secretion from any large surface of the mucous membranes, as those of the stomach and intestines."

Dr. Richard Harrison, in a late Gulstonian Lecture before the college of physicians, subsequently published in the Medical and Physical Journal, has drawn the attention of his brethren to the connexion between eruptive fevers, and inflammation of the mucous membranes. While ingeniously supporting this doctrine, however, he has gone a step beyond Broussais himself, by supposing "that it is irritation of *one organ solely* that will produce this effect, (fever) and that organ is the mucous membrane." This is denying the power of any other inflamed organ; as, for instance, the brain, to produce symptomatic fever, until the disorder has reached the mucous membranes, when "derangement of certain functions of the body," hitherto denominated fever, becomes immediately developed. It is somewhat mortifying to human, and particularly to medical speculations, that two learned and ingenious physicians, in the present advanced era of pathology, should, in the British capital, promulgate two theories respecting fever—one maintaining that it depended *always* on inflammation of the brain—the other, that it *never had* such a source. Our own observations do not lead us to coincide entirely with either Dr. Clutterbuck or Dr. Harrison. The etiology of fever is too various to admit an unvarying pathology of the disease. Truth would appear to lie between these exclusive extremes; for, granting that fever was always dependent on topical inflammation, that topical inflammation will not be found exclusively confined to a single organ or structure in the body.* Nevertheless the public are greatly indebted to those gentlemen who have endeavoured to assign fever a local habitation, since the doctrine points to by far the best practice in the majority of cases. If we could bring ourselves to the doctrine of an *exclusive seat* of fever, we should certainly be inclined to consider the mucous membranes as that seat, for it appears far more generally affected than any other tissue in the body; but we are not converts to the doctrine, notwithstanding the ingenuity and acuteness of its advocates.

As far as respects the eruptive fevers, however, we are strongly disposed to agree with Dr. Harrison and those other practitioners already alluded to, that the primary exciting cause, be it a specific contagious miasm, or certain unknown peculiarities of atmosphere, is first applied to the mucous

* Med. and Phys. Journal, July. 1820. p. 17.

membranes of the lungs and primæ viæ, and that in the said tissues we have the first indications of disordered function, during life, and very unequivocal vestiges of inflammation, on dissection.

"In fact," says Dr. Hastings, "the membrane (in measles) is sometimes affected in patches nearly approaching to the figure of semicircles, in the same manner as the skin is in that disease." 193.

Under such circumstances, and knowing as we do, how commonly a disordered state of the internal secretions will affect the skin, we may fairly conclude that the febrific miasms which occasion the eruptive fevers take the route above mentioned in their action on the human frame. But although we conceive that inflammation is the danger to be guarded against, and the point to be held in view, while treating the eruptive fevers; yet we cannot bring ourselves to agree entirely with those who would identify *this* inflammation, as far as treatment is concerned, with inflammation occurring under common circumstances, and independent of any eruptive disease. It is quite evident that in the exanthemata Nature expels the poison, or, at all events, produces a metastasis to the skin—and this she does not appear to attempt in *common* inflammations. Some little deference then, we conceive, is to be paid to Nature in this specific operation, and her work should not be rashly interfered with, until she appears to be going wrong. We find that, under common and favourable circumstances, Nature conquers the internal inflammation in her own way; we think therefore that it is only where the interior functions labour, and the internal structures are threatened with disorganizing inflammation, that we are to act as boldly as in the common phlegmasiæ of the internal organs. In the latter case, we are convinced that nothing but pure antiphlogistic measures can be effectual, and those put in force with vigour, not timidity.

Having thus glanced at the pathology of the mucous membranes in the exanthemata, we shall proceed to that of the lungs, as more commonly and obviously affected under other circumstances.

The respiratory organ is more exposed to external impressions, especially of climate, than any other viscus in the body; and its lining or mucous membrane, which is the most sensible structure of this complicated apparatus, is evidently the first surface on which these impressions can be made. It is to be borne in mind that whatever raises the sensibility or irritability of the mucous membrane of the lungs (or indeed of any other tissue) beyond the natural standard, augments proportionally the vascular fulness of the part; and, on the other hand, whatever determines an overplus of blood to this

membrane, elevates its sensibility beyond the healthy boundary. Now in variable climates particularly these oscillations in the circulation and excitement of the mucous membrane are almost hourly produced. All irritating substances diffused in the atmosphere and drawn into the lungs, excite the nerves of their lining membrane; and this excitement draws an afflux of blood to the part—while every considerable alternation of temperature in the air, impels from the surface of the body an increased quantum of blood to the interior organs generally, but especially to the mucous membrane of the lungs, accompanied, or quickly followed, by a corresponding afflux of sensibility. This is no imaginary doctrine. Common observation pointed it out among the snow-covered mountains of Styria, when the legions of Napoleon were overrunning the Continent.

“Toutes les fois,” says Broussais, “que la température de l’air ou de l’eau vient à diminuer autour de l’homme, qui, d’ordinaire, baigne dans ces fluides, la peau se refroidit, ses évacuations cutanées diminuent, le sang est en moindre quantité dans l’organe cutané, dans le tissu cellulaire et dans les membres; il abonde dans la muqueuse pulmonaire, ce qui est démontré par un sentiment de plénitude qu’on éprouve en inspirant, dans la poitrine; l’exhalation et la sécrétion muqueuse y sont augmentées. Si, après la cessation de la cause, l’équilibre n’est pas rétabli, l’homme a une irritation morbifique dans la membrane des bronches.”—*Tom. I. p. 140.*

In the various avocations of life there are numerous other auxiliary causes in the production of these irregularities of the circulation and excitement in the pulmonary apparatus. Inordinate exertions of the body or of the voice continually strain the vessels of the lungs; and, where any predisposition exists, excite a tendency to inflammation or congestion. And this leads us to inquire what are the symptoms of this inflammation? Are we to consider every excitement of the mucous membrane of the lungs, as evinced by an increased secretion from its glands, as inflammation? Or, would it not be more correct pathology to consider *irritation* as the first link or grade, which may or may not rise into actual inflammation of the mucous structure? Volatile alkali or snuff will excite a considerable secretion from the mucous membrane of the nares, and upper portions of the larynx and fauces, with sneezing or coughing; but are we justified in calling this inflammation? Fruit and various other ingesta will often so excite the mucous membrane of the bowels as to occasion a smart diarrhœa, but is this inflammation? We think the following sentence of Broussais is worth attending to:—

“If this irritation exhibits no other indication of its existence than a disordered mucous secretion (*un vice de la sécrétion muqueuse*)

it is called *catarrh*; but if it manifests itself by a violent disturbance of the circulation, joined to an alteration in the mucous secretion, we call it *pulmonic inflammation*."—*Tom. I. p. 140.*

This is probably all the distinction which we at present possess, between irritated function and inflamed structure. We are carefully to bear in mind, however, that inflammation almost invariably commences with irritation of function; and that irritation of function readily passes into inflammation or other disorder of structure.

We now come to the subject of *Bronchitis*, and here we take up the work of Dr. Charles Hastings, a gentleman whose zeal and talents will, we venture to prognosticate, do honour to the present era of pathological investigation, and contribute greatly to the progress of the healing art.

Dr. Hastings has presented to the reader a concise yet clear exposition of what has been written on the subject of bronchial inflammation, previously to his own time, on nearly the same plan as Dr. Cooke has adopted on the subject of nervous diseases—a mode of proceeding, in both cases, which we highly recommend to the attention of our brethren, as deserving their warmest patronage and support.

Dr. Hastings very properly divides *bronchitis* into two kinds, the acute and chronic, together with the varieties of each kind which present themselves in practice.

Symptomatology of Acute Bronchitis. § I. Dr. H. considers *catarrh* as the lowest grade, or mildest form under which bronchial inflammation is observed. The symptoms of this affection are well known, as well as its salutary termination in a mild mucous expectoration, which relieves the turgescence of the vessels, and permits the membrane to regain its pristine integrity of function. It is not very uncommon, however, for highly inflammatory symptoms to supervene on *catarrh*, occasionally, or the disease to degenerate into an obstinate chronic affection, in delicate constitutions, and under mismanagement or neglect. The cough then becomes severe, the expectoration copious and puruloid if not purulent, the dyspnoea considerable, the pulse quick, while the patient emaciates and exhibits most of the phenomena of *phthisis*, which, if not checked, prove fatal.

On dissection, in such cases, according to Dr. Hastings, tubercles are generally found in the lungs, and the mucous membrane much diseased, viz. ulcerated, and the bronchia and air cells filled with purulent matter.

§ II. The second variety happens generally during sudden atmospherical vicissitudes, in old people, and phlegmatic

habits. The apparent mildness of the attack is fallacious; the febrile symptoms are not near so strongly marked as in pneumonia; there is little or no fixed pain in the chest, but only a sense of uneasiness and tightness; there is oppression at the præcordia, with anxiety in the countenance, lassitude over the body, quick and laborious respiration, wheezing, and, as the disease advances, a noisy breathing, from the accumulation of the secretions in the air cells and bronchia. Hoarseness is common; and the patient cannot breathe deeply without exciting cough, or increasing pain, if any existed. In the early period of the disease, the dyspnoea is not much aggravated by the recumbent posture; but as it advances, the respiration is freer in the erect position of the body. Dr. Badham remarks, that in some cases of asthenic bronchitis, there are periodical exacerbations of the dyspnoea, resembling transitory fits of asthma, with sudden constriction across the thorax, and momentary loss of voice. At the very beginning, there is often a dryness of the mucous membrane, the secretions being diminished; but cough is always present, and some expectoration usually attends the progress of the complaint. When a copious expectoration comes on of thick, viscid, opaque mucus, the violence of the cough is generally diminished. Vomiting not unfrequently is excited by the cough in bronchitis, and the discharge of dense white mucus, sometimes moulded into ramifications, usually relieves the bronchia for a time. After violent paroxysms of coughing, the patient is often left breathless, with a sensation of tightness across the chest. Great pain across the forehead generally accompanies the cough—often vertigo and drowsiness. The tongue and stomach are deranged, and there is thirst. At the very beginning the circulation is not much disturbed; but in the progress of the disease, the fulness and hardness of the pulse are perceptible. The temperature of the body is not, in general, much increased, though the cheeks are often flushed, with evening paroxysms of heat and restlessness. The surface is dry, unless when acted on by diaphoretics, and blood drawn usually shows the buffy coat. The duration of this species of bronchitis is very uncertain.

“In some cases,” says Dr. Hastings, “it terminates in a few days, whilst in others it runs on to a much longer period. In the more violent examples, when the remedies employed do not check the progress of the symptoms, the pulse towards the seventh or eighth day becomes very quick and much weaker; occasional perspirations break out, the nails and lips assume a slightly livid hue, and the countenance is distressed, anxious, and pallid, with somewhat of a purple tinge. In fact, every symptom bespeaks obstruction in the air passages. Soon after the extremities grow cold, and the patient dies from suffocation.” 163.

In less dangerous cases the more distressing symptoms begin to subside in six or seven days, with a copious, bland expectoration, which generally continues for some time, and prevents the patient from recovering his health for several weeks. In this state unfavourable weather may fix a chronic and obstinate affection of the mucous membrane, which occasionally destroys the patient with all the symptoms of phthisis, but without disorganization of the parenchymatous structure of the lungs, as will be shown hereafter. Hydrothorax is not a very unfrequent termination of this complaint when long protracted.

§ III. Hitherto our judicious author has been considering the disease as of a comparatively mild, catarrhal nature, or in old and phlegmatic subjects, where the pyrexia does not run high, and the disease is not very rapid in its course. But when the subject is strong and plethoric, the symptoms assume a tone of great severity. While the pulse, tongue, and surface indicate violent reaction, the countenance is often pallid. Even here there is rarely any fixed pain, but only a distressing tightness in the chest. The breathing is laborious, and only mitigated by the erect posture. The dyspnœa is far greater than the cough. There is some expectoration; a failure of which is a most unfavourable symptom. This stage of excitement, if not relieved, almost always terminates in a corresponding collapse of the system; when we have orthopnœa, purple lips, sunken and quick pulse, diminished temperature of surface, cold perspiration. The expectoration now becomes scanty, or ceases altogether, and the patient dies suffocated by the accumulation of secretions in the air cells and passages, often as early as the 5th or 6th day.

Vigorous measures at the beginning occasionally check the dangerous symptoms; but the great debility necessarily induced renders recovery slow, and a tedious chronic disease too often ensues, characterized by frequent and violent cough, with a very copious expectoration of puruloid matter, and, in fact, all the symptoms of pulmonary phthisis, sometimes terminating favourably, when aided by climate or season; often carrying the patient off in a state of marasmus and hectic fever.

§ IV. Young children are subject to acute bronchial attacks more speedily fatal, though not apparently so severe or dangerous as the last-described variety. It is most common in the spring, commencing with, and retaining the catarrhal character. The breathing is somewhat quickened, with wheezing, but not much dyspnœa, nor uneasiness from supi-

nation. The cough is slight, and there is but little expectoration, except when vomiting is induced. The appetite is generally preserved, and the fever is moderate, but the pallor of countenance is remarkable from the beginning, with frequent, and sometimes hard pulse. In the progress of the disease the breathing becomes very variable—sometimes quite free; sometimes threatening immediate suffocation. These remissions and exacerbations, Dr. Hastings remarks, continue throughout the disease, the state of the circulation varying with, and apparently depending on, that of the respiration.

“The disease is not stationary, the symptoms soon become more distressing. The aggravations of the difficulty of breathing are more alarming, and the remissions less perfect. The child often falls into a comatose state. A slightly livid tinge makes its appearance on the lips, from which the pallid cheeks are not entirely free. Even at this late period gleams of hope sometimes burst upon us. For a short time the difficulty of breathing may seem to subside, and the child to be better. But these hopes are never realized; even the next exacerbation of the symptoms may terminate in suffocation.” 170.

In urgent cases the disease runs its course in about 72 hours; in the more protracted instances it usually terminates in less than five or six days.

§ V. In this section our intelligent and observant author traces the connexion of bronchitis with cutaneous diseases; but this subject was discussed at the commencement of this paper, and need not be entered upon here.

§ VI. In the sixth section Dr. Hastings takes up complications of bronchitis with diseases of the abdominal viscera. This combination, he observes, is frequently seen in the second variety (§II.) of bronchitis, arising, as it often does, in habits deteriorated by intemperance.

“In these cases,” says Dr. H. “a disease of the liver is brought on, which, by the irritation it produces in the mucous membrane of the lungs, often excites inflammation there. If this occur, we have in addition to the pulmonic symptoms above described, the various symptoms indicating a languid hepatic affection.” 177.

Here there is fulness with tenderness in the right hypochondrium, sense of oppression at the stomach, nausea, bitter taste in the mouth, giddiness or pain in the head, the fæces being generally dark coloured and fetid. It is no uncommon occurrence for the more severe bronchial inflammations to be accompanied with symptoms of acute hepatitis, especially where the pulmonic affection has succeeded to measles. Gastric inflammation is occasionally combined with bronchitis, and then we have dillibility, pain in the stomach, in

creased by ingesta or pressure, together with the usual symptoms of gastritis. The same may be said where peritonitis occurs in combination with bronchial inflammation.

But Dr. Hastings thinks that inflammation of the larynx and upper part of the trachea is the disease most frequently found in conjunction with bronchitis.

"The symptoms," says Dr. Hastings, "which denote the first attack of chronic inflammation of the trachea, which is very insidious in its approach, are a tickling cough and tenderness in some part of the trachea, pressure generally producing a cough. The voice is always changed, the patient often speaking in hoarse whispers. The pulse is accelerated, fever for the most part attends, and a dense mucus is often expectorated.

"If the disease proceed to ulceration, the voice becomes more affected, the pulse is greatly accelerated, and the cough is harassing, and attended with a copious purulent expectoration. The countenance expresses great anxiety, and the respiration is laborious; but no pain is felt in any part of the chest, though it is often referred to the epigastrium, when the dyspnoea has continued long." 179.

During this chronic disease, exposure to cold or other cause, may light up acute inflammation, which spreads along the whole of the mucous membrane, and then we have the symptoms of bronchitis mingled with those of chronic tracheal disease. We have then, superadded to the symptoms described above, a distressing straitness across the chest, a more aggravated dyspnoea, sometimes a slight lividity of the lips, and a more severe fever. If, by vigorous measures, the inflammation be checked, the original chronic affection of the trachea either goes on slowly to fatal disorganization, or yields, though seldom, to a long course of medicine.

Tumours, as bronchocele, occasionally by pressure on the windpipe involve the whole mucous membrane of the lungs in inflammation. It must also be candidly confessed that the features of bronchitis, especially when the disease is combined with other affections, are many times so faintly or obscurely marked, that it is with difficulty, or not at all, we are able to recognise them.

"Sometimes it is complicated," says our intelligent author, "with a multitude of other phenomena. Sometimes its commencement is imperceptible, its progress insidious and obscure, and its termination slow. Sometimes scarcely any of the symptoms of bronchitis appear; the patient is visibly affected with some other disease, which seems to prove fatal; and the inflammation of the bronchia is not discovered till after death. Sometimes its abrupt attack, its rapid course, and its combination with inflammation of the lungs, pleura, pericardium, or heart do not allow us, with any degree of certainty, to fix the character or seat of the affection." 182.

Appearances on Dissection. These, of course, are various, according to the different forms of the disease. In the more acute cases, the lungs do not collapse on opening the thorax, although the parenchymatous structure be sound. On slitting open the trachea "it is often found full of fluid, (says Dr. H.) which is sometimes purulent, and at others consists of serous matter, with which coagulable lymph or mucus is generally mixed. The bronchia are, for the most part, plugged up by purulent matter, or tenacious mucus, or bloody serum." 182. When the substance of the lung is cut into, a frothy fluid escapes. In a few instances, Dr. H. observes, no fluid was found in the air passages, but only inflammation of the mucous membrane, which is always present. The capillary vessels of this tissue are invariably red and dilated; sometimes so much so, that this membrane "appears like a congeries of blood-vessels." When the disease is less rapid in its progress, the whole of the mucous membrane is not always inflamed. Patches of inflammation are surrounded by portions of sound membrane, while a considerable quantity of serous fluid occupies the air cells. This is particularly the case in those who die of rubeola; but, "when bronchitis (says our author) succeeds to pustular cutaneous diseases, the mucous membrane is sometimes affected with minute ulcerations, and the whole of its texture appears much redder than natural." It is not to be supposed that even in acute bronchitis the inflammation is always bounded by the mucous membrane. The structure of the lungs is sometimes affected. They are either reddened, hardened, suppurated, or tuberculated. This is still more the case in chronic bronchitis, as we shall see farther on. The pleura too is not unfrequently inflamed, exhibiting, *post mortem*, a whitish incrustation, or an effusion into the cavities of the chest. The heart and its envelopes occasionally participate in the inflammation. "The membrane lining its cavities is more particularly the seat of inflammatory action. Coagulable lymph is occasionally found on the auriculo-ventricular valves. The cavities of the right side of the heart are, for the most part, larger, and contain more blood than usual." *Hastings*, p. 186. The stomach is sometimes found inflamed, and even ulcerated;—the liver in some cases indurated—of a lighter colour than natural, and enlarged, or its peritoneal coat inflamed and thickened.

"Every part of the peritoneum is now and then in a morbid state. Its whole surface is granulated; the intestines are united together and covered with a white incrustation; and a milky puriform fluid is contained in the cavity of the abdomen." 186.

In a section on the *nature* of the foregoing affections, Dr.

Hastings makes many reflections and observations which evince the soundness of his judgment—the best attribute of a physician. Dr. H. dissents from Dr. Badham, (whose work, by the by, is a very valuable one, though too much overlooked by the profession at present) respecting the cause of the *wheezing* in bronchitis. Dr. B. attributed it to a certain constricted state of the inflamed parts, rather than to a redundant secretion of mucus. Dr. H. takes the contrary side of the question; attributing not only the wheezing, but the occasional exacerbations of dyspnœa, to the mechanical interruption which respiration experiences from redundant secretions in the air passages. Were we permitted to offer an opinion on the subject, we would say that the temporary exacerbations of dyspnœa were partly owing to the exuberant secretions, and partly to the difficult transmission of blood through the lungs when either their substance, coverings, or linings were inflamed. The dyspnœa, in what is termed spasmodic asthma, occurs long before the increased secretion of mucus, and, as Dr. Bree, in his excellent treatise on the subject, well explains, is owing to *irritation* in the lungs, whatever may be the cause of that irritation.* Now we all know, that wherever there is *irritation* there will be an increased *afflux of blood*; and the respiratory muscles being called into unusual exertion is the index of Nature's sufferings, and the effort she employs to obviate them, as Dr. Bree has long ago and ably explained. The headach in the second variety of bronchial inflammation is doubtless, in a great measure, owing to the "congestion of the blood-vessels of the lungs," which "necessarily interferes with the due return of blood from the head." The extreme debility attendant on acute bronchitis is readily accounted for by the state of the air cells in the lungs, preventing the decarbonization of the blood, and thus occasioning the lividity of the lips, and laborious respiration preceding the fatal termination. This interruption in the pulmonary function on the blood must also affect the brain and nervous system, and thus the functions of the whole body are drawn into disorder.

Treatment of Acute Bronchitis. Broussais and Hastings exhibit the following concise view of the treatment in language so precisely similar that the English appears almost a literal translation of the French:—

BROUSSAIS. "Modérer l'effort du système sanguin, s'il est outré,

* See the whole of Section II. in Dr. Bree's work, where great erudition and judgment are combined to elucidate the subject.

par la saignée générale et locale, par les boissons mucilagineuses et aqueuses, un peu acidulées, et par l'abstinence des alimens : favoriser doucement la transpiration et diriger les mouvemens vers l'extérieur par les topiques émolliens, dans la violence de l'éréthisme, par les rubéfiants et les vésicans, lorsque la réaction vasculaire et l'activité du système nerveux diminuent, telles sont les indications générales qui s'offrent à remplir dans le début des inflammations sanguines de l'organe pulmonaire." 148.

HASTINGS. "To moderate the excitement of the sanguiferous system—general blood-letting, acidulated mucilaginous drinks, and abstinence from all stimulating food. To promote expectoration and perspiration—antimonial and saline medicines. To direct the fluids toward the surface, and relieve the congestion of the debilitated capillaries—local blood-letting, blisters, and rubefacients." 208.

Dr. Hastings observes, that although general blood-letting is by far the most powerful for diminishing the excitement of the system, yet it is not equally applicable to all the varieties of bronchitis. In the *first* variety, for instance (§ 1) it is seldom necessary to detract blood, unless the fever be considerable, when it may be done with safety. In the *second* variety, venesection is generally proper, though to be employed with caution, as Sydenham long ago observed.

"The abstraction of ten ounces of blood from the arm early in the disease, sometimes mitigates the symptoms, after which it is generally more safe to depend upon an attention to diet, proper expectorants, and local evacuations. The peculiar tendency to effusion often renders the treatment of this affection difficult, as we are sometimes deterred by this cause from pursuing the blood-letting when the inflammatory symptoms indicate its employment. In this event we must subdue the inflammation by those means which are least likely to bring on effusion." 209.

But as the *third* variety of bronchitis sometimes occurs in robust habits, occasioning violent symptoms, the short state of excitement quickly terminating in irremediable debility, so the small space of time allowed for antiphlogistic measures must be seized, for the purpose of making a decided impression on the complaint. Here blood-letting should be boldly employed—from twenty to thirty ounces may be taken from the arm at the first venesection, unless symptoms of syncope supervene. Although few cases yield to one bleeding, yet the repetition must be determined by the symptoms of the disease, and by the strength of the patient.

When the disease attacks children, general blood-letting, as far as the strength will permit, should be employed. And we may here observe that children, from a year upwards, may almost always be bled from the arm, although practitioners have a very general idea, that at such early periods

we cannot procure blood from the brachial veins. Dr. Hastings thinks there is an advantage as well as facility in opening the external jugular veins of children—"as the blood is taken from a vessel which pours its contents into the thorax." But surely the brachial veins transmit their blood to the same point, and almost as directly as the jugulars. If children do not bear bleeding as well as adults, still, when life is menaced, we have no alternative—without detracting of blood there is no hope, and even that powerful measure does not always arrest the progress of the disease. In combinations of bronchitis with chronic ulceration of the trachea, the debility is so great, that bleeding, to any extent, is rarely admissible.

Vomiting has been recommended by many authors.

"The benefits," says Dr. Hastings, "which arise from emetics are two-fold: they unload the *primæ viæ*, thus removing causes of irritation: and they increase the expectoration, on which, as is above observed, the favourable issue of the case so much depends.

"Again, when the disease occurs in young children, emetics appear to be extremely serviceable, the stomach and bowels being generally in a bad state, and the bronchia loaded with redundant secretion." 212.

Our intelligent author justly observes, that the aqueous solution of tartarized antimony is, in general, the best medicine for producing these effects, excepting in young children, where Ipecacuan is to be preferred. Antimony generally excites diaphoresis, and, in fact, opens most of the secretory vessels; thus reducing the whole mass of fluids, and consequently checking the inflammation of any structure. Dr. H. thinks they should be given in saline draughts, and that nitrate of potass should always be combined whenever there is much fever.

In the second variety of bronchitis some have recommended the more stimulating expectorants. They cannot, Dr. H. thinks, be proper where the heat is much increased.

"In the advanced stage, however, when the inflammation is nearly subdued, and the bronchia are clogged, ipecacuanha combined with squills is often of great service; but in all cases of this disease, as long as the excitement is considerable, if antimonial remedies be accepted, no expectorants are so useful as mucilaginous mixtures." 213.

Cathartics have not been considered beneficial in thoracic inflammations, as they were supposed to check expectoration. Our own experience has long ago taught us that, in common pulmonic inflammation they are exceedingly useful—*anterior* to the complete establishment of expectoration—that is, during the first days of the disease, as they not only

powerfully deplete the whole system, but act by derivation from the pulmonary to the abdominal organs. When, however, Nature has fairly established expectoration, we hold it to be unsafe, because we have witnessed its bad effects, to act with any degree of force on the mucous surfaces of the bowels, since it very commonly interrupts the salutary discharge from the lining membrane of the lungs. If bleeding and purging are properly managed in the early stage of thoracic inflammation, there will rarely be profuse expectoration, and sometimes none at all. Dr. H. thinks there is less danger from purgatives in pectoral diseases than was once imagined, and directs that, in every variety of bronchitis, the bowels be kept lax, while at the commencement an active purgative should be administered to clear well the alimentary canal.

In the combination of bronchitis with abdominal disease, it is evident that the free employment of cathartics is of the utmost importance; particularly where the liver is affected, and its secretions deranged. Here we must always have recourse to cooling and mercurial purgatives. "From small doses of the neutral salts, given so as to keep up a constant catharsis, the greatest benefits ensue." *Hastings*.

"Mercurials, exhibited so as to act upon the system, are not usually beneficial; nevertheless, when in the sixth variety the liver is evidently affected, small doses of blue pill may be given, so that the gums may become tender." 214.

When bronchitis is combined with inflammation of the trachea, (producing symptoms resembling croup) Dr. Hastings thinks that analogy would lead us to employ calomel in frequently repeated doses. In one case (14th) where bronchitis occurred in conjunction with *chronic* inflammation of the mucous membrane of the trachea, great advantage arose from calomel and antimonial powder.

"The voice had become very indistinct, and the quantity of sputa was considerable. The patient took eight grains of calomel every day for several weeks, and eventually recovered."* 215.

In bronchial inflammation, as long as there is much fever, Dr. Hastings thinks opium is prejudicial. "But when that declines, and irritability of the system and air passages still prevails, it not unfrequently allays the cough, and calms the

* In laryngeal inflammation of the *chronic* kind, we consider mercury a valuable auxiliary to the regular depletory measures, and counter-irritants. We may refer for a good instance to Dr. Hall's case of *Laryngitis* requiring laryngotomy, in the *Medico-Chirurgical Transactions*; or the *second* vol. of our *Quarterly Series*, p. 610.

patient. But opiates must be employed with great caution, especially in the *second* variety; for when the secretion is copious, and the strength much reduced, they interrupt, for a time, the efforts to expectorate, and may thus prove fatal."

"In combination with small doses of calomel, opium may sometimes be exhibited at an earlier period of the disease. When conjoined, these remedies not only diminish the cough, and assist expectoration, but seem likewise to regulate the secretions throughout the system." 215.

In the *second* variety, especially when a disposition to effusion is manifested, mild diuretics are serviceable. But in all varieties of acute bronchitis, as Dr. Hastings justly observes, expectoration occasionally stops, apparently from want of power in the system; in which deplorable cases we must endeavour to support the strength and relieve the bronchia of the secretions with which they are clogged. Ammonia is a medicine the best calculated to effect the latter purpose, and in truth we have seen patients, as it were, snatched from impending suffocation by this valuable medicine.

Dr. Hastings appears to have entirely overlooked the effects of a regulated temperature of the patient's atmosphere, while labouring under acute bronchitis. This we consider to be a defect in a systematic work, and Dr. Hastings will doubtless allude to it in a future edition, many of which will ultimately be called for. Broussais particularly alludes to the necessity of a regulated temperature in the sick man's chamber:—"par un appartement convenablement échauffé on donnera à l'atmosphère ambiante une température qui favorise les évacuations cutanées.* The same able physician directs our attention to warm clothing, and especially flannel next the skin, to keep up a moderate degree of excitement there. The French Physician having seen so many catarrhal inflammations protracted into a dangerous chronic state, apparently, in some cases, from debility, is more disposed to give tonics and mild nourishing diet, as soon as the expectoration becomes white and thick, than British practitioners are inclined to do.

"Aussitôt que l'expectoration blanche et épaisse annonce la résolution ou l'excrétion qui se décharge dans les bronches, on combine les toniques aux émolliens, on permet les alimens, et l'on ramène peu à peu le malade à son genre de vie accoutumé." 148.

In these lingering inflammations between the acute and chronic states, Broussais administered diluted red wines, and

* Tom. 1. p. 149.

the decoction of cinchona lowered with mucilage—a medicine which he found preferable to all other tonics. Where intermittent fever is combined with bronchial inflammation—no rare case among soldiers in unhealthy situations—the combination is very difficult to manage; for if the fever continues, the bronchitis is aggravated by the cold fits determining the circulation to the interior organs, while bark or other tonics given to stop the ague, have generally the effect of heightening the local inflammation in the mucous membrane of the chest. In such circumstances, Broussais thinks it is more dangerous to exhibit stimulating febrifuges than to allow the intermittent to take its course for some time till the bronchitis is reduced.

But to come to the local means of cure. Topical blood-letting and blisters are of most importance in acute bronchitis. As general bleeding diminishes the excitement of the heart and larger vessels, so local detractions relieve the weakened and dilated capillaries—hence much advantage is derived from combining both measures. “Whenever therefore,” says Dr. Hastings, “in bronchitis the symptoms require general blood-letting to be repeated, we should also have recourse to local evacuation.” Blisters, our author observes, should not be applied “till the excitement has been considerably relieved by blood-letting.” But when bronchitis occurs in phlegmatic habits, and assumes the form of peripneumonia notha, blistering may be employed from the beginning, and is one of the principal remedies to be relied on in that variety of the disease. In obstinate cases the blisters should be large, so as to cover the whole anterior part of the chest, and the surfaces kept open, or new ones applied.

The tepid bath, together with local fomentations or cataplasms, may also be used to remove the tension of the surface and excite diaphoresis. For the debility which almost always succeeds attacks of this disease, “nothing,” says Dr. Hastings, “is more appropriate than a light nourishing diet with change of air.” 218.

From page 218 to page 263 of Dr. Hastings’s work, nineteen interesting cases of bronchitis are faithfully detailed, and very satisfactorily illustrate the principles and practice of which we have endeavoured to present an analysis to our readers. This part of the work we recommend to the *study*, not merely to the *perusal*, of our brethren, as containing a series of important and authentic documents which deserve their most serious attention.

CHRONIC BRONCHITIS. This disease, as Dr. Hastings truly remarks, embraces a wider field of investigation than



we should have, at first sight, supposed. It is so often complicated with other affections, and so frequently gives origin to the most fatal disorganizations in the thoracic viscera, that it is entitled to a more rigid inquiry than it has hitherto obtained in this country at least.

Dr. Hastings divides chronic bronchitis, as he has done the acute, into several varieties—rather too many indeed, we think, for common practical purposes.

1. The first variety may be considered as the sequela of the acute form in old persons, attacking the patient generally at the commencement of cold weather, and lasting through the winter. The irritable mucous membrane is sensible to every atmospheric vicissitude—the respiration is uneasy, with occasional wheezing—the fits of coughing are most violent in the morning—the expectoration is copious, consisting of tenacious muco-purulent fluid, sometimes white and frothy. None, or only transient pains are felt in the chest—there are generally signs of disorder in the digestive organs, with sense of weight or pain in the epigastrium, white or loaded tongue, loss of appetite, quickened pulse, high-coloured or scanty urine, irregular bowels. Occasionally, however, chronic bronchitis exists for a long time without much constitutional ailment, or febrile action. This variety of the disease sometimes lays the foundation for hydrothorax, but more commonly subsides as summer advances.

2. The second variety resembles tubercular phthisis. The cough is severe, especially on lying down and getting up—the expectoration copious, and part of it lumpy, varying in size from that of a pea to that of a bean, which lumps sink in water, and refuse to mingle therewith, being viscid, sometimes translucent, sometimes opaque. With this expectoration there is often a flaky substance, not unlike the ramifications of the bronchia, which floats on the surface of the water. To these, Dr. Hastings remarks, there is usually added a third kind of matter, of a white, yellow, or greenish colour, which sinks in water, but by agitation may be broken into ragged portions, and somewhat diffused therewith. Lastly, some blood is often expectorated. The breathing is quickened, and often laborious, with a sense of oppression and tightness across the chest, although a full inspiration can be taken without pain. In bed in the morning the pulse seldom rises above 90; but when the patient sits up, the pulse is generally from 100 to 110, with an evening augmentation to 120. The temperature of the surface is pretty steadily above par, with a dryness and occasional roughness.

“ In the night partial perspirations break out, which more especially appear about the head and breast. The desire for drink is al-

ways greater than in health. The urine is constantly high coloured, and deposits a copious red sediment. The face is often pallid, but there is sometimes a flush on the cheek, which more frequently appears during the evening febrile exacerbation. At the same time that the symptoms above enumerated occur, the patient visibly loses flesh and strength, and becomes more unequal to every kind of exertion." P. 268.

If the disease be not checked, a more alarming train of symptoms soon supervene. The debility and emaciation advance; the cough and expectoration increase—the latter sometimes to a pint or a pint and a half in the night—principally of a yellow or greenish colour, sinking in water, and diffusible, by agitation, therein. The dyspnoea is now distressing, as is the sense of tightness and weight across the chest, rendering the patient breathless on the slightest exertion. The pulse is now seldom under 120, and in the evenings it is more. "The tongue becomes cleaner, and, in many cases, all fur is removed: it assumes a shining appearance, and is redder than in health." There is nocturnal perspiration, leaving the patient much exhausted. "The body," says Dr. Hastings, "is inclined to constipation early in the disease; but, as the aggravated symptoms advance, a diarrhoea comes on, and, under these accumulated ills, the patient at length dies with all the appearance of tubercular phthisis. 270. Under proper management the second, or phthisical stage may often be prevented. In the advanced stage it not only resembles phthisis in appearance but in fatality.

The 3d variety which our author describes, we shall pass over, as we really do not think it likely that it will often be distinguished in practice from the foregoing. Here, indeed, we conceive Dr. Hastings has refined with unnecessary minuteness—a thing that ought to be guarded against in all practical illustrations of disease. We shall also pass over the 4th variety of chronic bronchitis succeeding cutaneous eruptions; and the 5th, resulting from irritating substances acting on the mucous membrane, as in the cases of stone-cutting and other unhealthy occupations, where hemoptysis is commonly produced; and where the disease disappears if the cause is removed, referring to the work itself for a more particular detail, in order that we may occupy more space with that variety of chronic bronchitis connected with diseases of the abdominal viscera.

6. One of the most common of these attendants of bronchitis is a chronic disease of the liver, of which our most intelligent author has introduced five interesting examples.

"It very often happens," says Dr. Hastings, "that in the com-



mencement of this modification of the disorder we have no symptoms which can lead us to suspect any pulmonic affection. They are altogether such as are usually produced by hepatic disease. We have pain in the right hypochondrium, inability to lie on the left side, irregularity of the bowels, loaded tongue, and depression of spirits. The first warnings of disease in the bronchial membrane are very slight. There is a dry cough, unattended with any pain, which is often considered the necessary attendant on hepatic affection. By degrees the cough becomes more troublesome, and when it continues for some time, a tenacious mucus is expectorated. The breathing, too, is in some degree affected, and the patient complains of a weight and tightness across the chest. As the disease advances the cough is more troublesome, and the expectoration becomes copious : still, however, we do not trace much of the purulent character in the matter expectorated ; it is principally mucus. The expectoration, however, in a more advanced stage, increases in an astonishing manner, and at length becomes purulent. Blood is not unfrequently mixed with the colourless matter, and sometimes pure blood is coughed up in the early stage of the disease ; but in the cases of this kind which have been seen by the author, it is not a common occurrence." 277.

In these cases there is often a dull kind of pain, and always a tenderness in the epigastric region ; and in progress of time, an irregular hectic is formed, differing, Dr. H. thinks, considerably from the true tubercular hectic.

" It is true there is usually some evening exacerbation, during which the face is generally flushed. The hands and face also, are occasionally bedewed with perspiration in the night ; but this, for the most part, goes off before morning. The emaciation becomes very perceptible, though it does not proceed so rapidly as in tubercular phthisis." 277.

With the above, the disorder of the digestive organs is well marked by flatulence, irregularity of bowels, furred tongue, impaired appetite, sense of fulness in epigastrio, "the dyspnœa and cough being always worse when the digestive organs are much oppressed." If the progress of the disorder be not checked, the symptoms approach still nearer to those of tubercular phthisis. Hectic fever becomes completely formed, and the patient is wasted with profuse perspirations, dropsical symptoms often preceding the fatal event.

Ulceration of the *stomach* occasionally is combined with chronic bronchitis ; but here the emaciation is considerable before any marks of the pulmonic irritation are developed. Gastric symptoms also precede the thoracic affection. It is well known that symptoms resembling tubercular phthisis occasionally supervene on disease of the mesenteric glands.

In cases of this kind, Dr. Hastings thinks that accurate investigation will generally show that the pulmonary affection is confined to the mucous membrane lining the bronchia and air cells.

Post Mortem Appearances. Non-collapse of the lungs, on opening the thorax, with discharge of frothy fluid when an incision is made into their parenchyma. The capillaries of the mucous membrane are always dilated—"in the most marked examples the membrane is throughout like a congeries of vessels, and very much resembles the villous coat of the stomach or bowels, when a fine red injection has passed into its minute vessels." *Hastings.*

This injected state of the capillaries is sometimes only in patches, the intermediate spaces being nearly natural. The bronchial membrane is usually thickened, "and not unfrequently its surface is pulpy." It was not uncommon for Dr. Hastings to find this membrane ulcerated, especially where the irritation was caused by mechanical substances. The bronchia and air cells are almost always filled with a purulent or muco-purulent fluid, mixed with bloody serum, and a frothy substance. When the disease extends beyond the mucous membrane, "the most common deviation from a natural state, (says Dr. Hastings) is a certain degree of thickening of the substance of the lungs, from which they become more solid." Tubercles are sometimes found in the lungs, when the mucous membrane is inflamed—they are sometimes in an incipient, sometimes a suppurated state. The pleura is often diseased. "Adhesions take place, and not unfrequently the whole of the serous membrane is full of tubercles." The heart is sometimes organically disordered, particularly in its valvular structure; and where abdominal disease have preceded the pulmonic attack, the liver is usually found in fault.

"It is generally enlarged and hard, and sometimes exhibits that peculiar nutmeg appearance which is so common. Its peritoneal coat is often very much thickened, and occasionally tuberculated. In some examples tubercles are also found in the substance of the liver; but this does not very frequently happen.

"When bronchial inflammation has succeeded to long-continued abdominal inflammation, the peritoneum is usually much diseased, being closely adherent to the bowels, and thickened. The whole of its reduplications on the viscera are sometimes thickly beset with tubercles of various sizes, some not exceeding a pin's head in magnitude, others as large as a pea. In some parts of the serous membrane, many of them being clustered together give it a very unnatural appearance for a considerable extent. The intestines are all

closely united together, and their peritoneal covering is apparently much inflamed.*

"The cavity of the abdomen generally contains a quantity of yellowish fluid, which has flakes of gelatinous matter swimming in it.

"The mesenteric glands are frequently found much enlarged, and occasionally suppurated." 284.

Here ends the pathology of Dr. Hastings, with which intelligent author we have now, for some time, travelled in the strict analytical path, but from whom we must diverge for a moment to other sources of information on the subject under investigation.

Man, and the diseases by which he is assailed, are every where signally modified by the skies above him, the earth beneath him, and the host of moral and physical agents around him. In all cases, therefore, it is beneficial to take a comprehensive view of things, to prevent what Celsus complained of two thousand years ago :—"ex quo incidit, ut alia atque alia summi auctores quasi sola (auxilia) vindicaverint, prout cuique cesserant."† In civil life, and in the bosom of peace, men are not exposed to such intense causes of disease, as in the tumults of war, and the enterprises of emigration;—or at least if they are exposed to them, they have multiplied resources and means of counteraction. The pathology of diseases therefore varies, under different circumstances, and would appear to lead to different conclusions. Thus in the campaigns of the French armies, on the Continent, Broussais found that the almost universal pathological character of chronic bronchitis, or catarrhal inflammation, was an *induration of the parenchymatous structure of the lungs*, produced, he thinks, principally, by repeated exposures of the soldiers to cold and wet, under states of debility and privation.

"This chronic induration," he observes, "steals on in the intervals of great constitutional movements, although slight causes of irritation will readily kindle up the original storms. After seven, twelve, or fourteen days of pyrexia, the circulation becomes calm, the heat natural, the appetite returns, the complexion freshens, and strength appears to be fast returning. There only remains a cough, which gives little trouble during the day, but experiences an exacerbation at night. Frequently the cough is dry and husky; sometimes accompanied by much expectoration. In this state the patient goes about his affairs for a fortnight or a month; but now, on reflection,

* These appearances are similar to those so faithfully described by Dr. Baron in his work on "*Tuberculated Accretions of Serous Membranes.*"

† Celsus, Lib. iii. cap. i.

he finds that he loses strength, instead of gaining it—that his breathing is very laborious on going up an ascent. His physician will perceive a slight acceleration of the pulse, and a flushing of the cheeks, in the evening—gradually the complexion becomes pale and sallow—the face becomes bloated—the legs edematous, and the strength fails. All these symptoms go on increasing, especially the cough, which renders the night most distressing. Still the patient never desponds : and as in approaching his final goal, he becomes incapable of taking either exercise or nourishment, he is nevertheless calm, and apparently free from sufferings. Finally, in two, three, or sometimes four months, he becomes anasarcaous all at once, and dies suddenly.”*

The organic alterations which M. Broussais found after death, in these cases, were a reddening and induration of the parenchymatous substance of the lungs, so as to present the appearance and consistence of liver, in the centres of which indurated portions were sometimes observed certain softened and pasty points, as though the structure had putrefied. The mucous linings and pleural coverings were occasionally in a diseased state, with effusions or false membranes in the chest. This induration he considered to be always the effect of an irritation, of longer or shorter duration.

“ Ce point d’irritation a pris naissance dans les capillaires de la muqueuse. Nous avons observé que, né dans les capillaires de glandes muqueuses, le point d’irritation ne se que trop souvent propagé, d’abord dans toute la membrane, d’où il a, par suite, envahi le parenchyme. Arrivé a son dernier periode, il a transformé tout le poumon en une masse rouge, composée, autant que les sens peuvent nous en convaincre, de vaisseaux de toute espèce remplis d’un sang coagulé.—ib.

But to return to Dr. Hastings, under the head “Ratio Symptomatum of Chronic Bronchitis,” our able and ingenious author makes many judicious observations, which our limits will not permit us to quote. The section on “Diagnosis” is also interesting, and this we cannot entirely pass over, without culling some valuable matter. The great object of diagnosis is between bronchitis and tubercular phthisis. But it is to be borne in mind that not only are these two affections extremely difficult of distinction in advanced stages, but they are often combined.

“ Early in the disease, the absence of pain during inspiration, the capability of resting on either side in bed, (when there is no abdominal disease,) the wheezing noise in respiration, the leaden



colour of the lips, and the pallidity of the countenance, the appearance of the sputa, consisting almost entirely of mucus, occasionally streaked with blood, are symptoms sufficiently well marked to distinguish chronic inflammation of the bronchia from tubercular phthisis." 290.

When in advanced stadia of the disease the symptoms usually indicative of tubercular consumption become intermingled with those of chronic bronchitis, "the peculiar pallidity of countenance still continues, and there is in the majority of cases no pain in the chest; or, if it come on, it is diffused over the whole chest. The dyspnoea is not so great as in tubercular phthisis, and the patient can take in a much larger volume of air into the lungs." These *plus* and *minus* distinctions we have always considered extremely unsatisfactory.

"The quantity of matter expectorated in this disease is much greater than in tubercular or apostematous consumption, except at the time a vomica gives way, when large quantities are brought up; but this excessive discharge does not continue long in the latter disease, whereas in chronic bronchitis we often see a pint or a pint and a half of matter expectorated during the night, and that for a long period together. We have not a short tickling cough in bronchitis; it is deep and sonorous. The paroxysms of hectic fever are much less regular in chronic bronchitis than in tubercular phthisis. The perspirations are partial, confined, perhaps, to the breast and upper extremities. The emaciation too is, generally speaking, less in inflammation of the mucous membrane than in tubercular phthisis, though we do meet with cases in which the emaciation is as great in the former as in the latter affection. When the pulmonic symptoms have arisen from a diseased liver, it is a strong presumption that the seat of the disease is in the bronchial membrane; for in almost all cases of this description the mucous membrane is the part affected. When this combination occurs, the spirits are always depressed; and in addition to the usual pulmonic symptoms, we have in this form of the disease a painful and distended epigastrium, unnatural stools, and disordered digestion. The mouth is dry in the morning, and the tongue loaded. The fits of coughing are constantly excited when the stomach is overloaded, and are apt to come on when the patient is lying on either side in bed." 292.

Treatment. Broussais lays down two main indications in the cure of chronic inflammation of the mucous membrane of the lungs:—1st. to diminish the general excitability, and keep the circulation quiet; 2d. to draw the excitement and the fluids towards other organs, and particularly towards the skin. These we believe to be the grand objects to be kept in view. Of the means employed in the treatment of this complaint, Dr. Hastings observes that—"some act by directly

enfeebling the force of the circulation ; some moderate excitement by re-establishing the secretions throughout the system ; others act on parts in the neighbourhood of that which is diseased ; and a few are *directly* applied to the inflamed membrane." Both Broussais and Hastings give an unfavourable picture of the effects of *inhalation* of medicated liquids in diseases of the mucous membrane of the lungs ; and were it necessary to strengthen such authorities, we could bring forward strong proofs, from our own personal observation, of the non-efficiency of these medicated local applications.

" Le seul corps étranger," says Broussais, " qu'on fasse parvenir dans les vésicules bronchiques, c'est l'eau en vapeur ; mais il faut qu'elle soit chaude, et par sa température elle fait plus de mal qu'elle ne procure de soulagement par sa qualité relâchante. Je n'ai jamais vu résulter un grand avantage des fumigations. Tous ces moyens ne font que boursoufler la membrane, et augmenter le sentiment de plénitude et de compression pectorale."*

We think that M. Broussais has gone too far in condemning so decidedly the vapour of warm water as injurious in inflammation of the mucous membrane of the lungs, since we have seen considerable advantage derived from this measure ; but we fear that what he says respecting medicated fumigations will be found too true. The vapour of tar is the only kind of inhalation which Dr. Hastings has tried.

" Not one instance has occurred in the author's practice of even temporary relief in tubercular consumption by the inhalation of this vapour : indeed, it has appeared in some examples of this kind to cause a very tiresome irritation in the glottis, which has increased the cough. This has not been so much the case in chronic bronchitis ; in this disease it seems to assist other remedies in restoring the mucous membrane to its healthy secretion ; and in some very obstinate cases the inhalation alone has appeared to remove the diseased action in the mucous membrane of the lungs. In other instances the inflammation has been aggravated and rendered more acute by it. From the author's experience of this remedy, it appears that when the habit of body is irritable, and the inflammation at all active, the symptoms are increased by its use ; but if the disease have been long in a chronic state, and the habit of body be not irritable, relief follows its application." 309.

The above, we believe, will be found a fair exposition of the effects of tar vapour—at least it corresponds with what we have seen ourselves ; and we had opportunities of witnessing these effects a few years ago, when the hopes of relief drew crowds of pulmonary invalids to one of our principal

* Broussais, Tom. I. p. 151.



naval dock yards, for the purpose of inhaling the vapour of tar on a large scale there, under the direction of a gentleman who published on the subject. Many phthisical patients, indeed, as is usual when any new remedy is tried, declared themselves wonderfully benefitted, for a time ; but this benefit was, in most cases, either purely imaginary, or merely owing to the unusual evacuation of the lungs by the long-continued fits of coughing occasioned by the irritation of the tar fume. The tubercular disorganizations kept on, of course, their regular march.

In respect to blood-letting, Dr. Hastings justly observes, that although pulmonary inflammations, above all other maladies, are relieved by this powerful remedy, yet, "when the disease has existed long in the bronchial membrane, a considerable change takes place in its structure, and general debility always occurs, so that we cannot, in all cases, employ it with success." Even in those cases, Dr. Hastings thinks, where the chronic cough presents itself in persons not very much advanced in life, and whose constitutions are strong, with full pulse, inclined to hardness and frequency, large blood-lettings are improper, and "it is, perhaps, better to employ local than general blood-letting, for the former can be more frequently repeated, and the vessels of the lungs are thus unloaded at less expense to the system."

When catarrh has existed a long time in young persons, and produced symptoms resembling those of incipient phthisis, venesection will be improper. In such cases, recovery is slow, and is rather to be expected from the conjoined operation of several remedies than from the sudden operation of depletion. Repeated local detractions of blood are the safest means of reducing the superabundant excitement in the air-passages. Broussais, the most energetic of our French brethren, does not even mention local or general bleeding in chronic inflammation of the mucous membrane of the lungs. He merely cautions his countrymen against the employment of tonics and stimulants in this disease, which were probably in vogue when he wrote. In fact, the continental practice is here, as on too many other occasions, very inert.

After the force of the circulation has been weakened, but not till then, Dr. H. thinks blisters and rubefacients may be applied to the chest. "They generally relieve the cough, and by the irritation they occasion on the skin, seem to lessen the superficial inflammation going on in the mucous membrane. By their action, also, the purulent secretion from the internal surface of the lungs is sometimes converted into the natural mucus of the part." In those obstinate cases, resembling tubercular phthisis, the more permanent drain and counter-

irritation of a seton or caustic issue, will be necessary. Broussais, and the continental physicians in general, attach much importance to topical applications to the chest. Broussais states that he had cured obstinate and long-continued catarrhal inflammations by large poultices to the front of the thorax. "Le soulagement fut si prompt, qu'il surpassa mon attente." "I have always," says he, "employed this remedy when circumstances permitted." "I prefer cataplasms to blisters when the patient appears, at the same time, nervous, irritable, and yet disposed to plethora. These cataplasms, he thinks, are superior to fomentations, as they are more manageable, and less apt to produce a chill, by wetting the patient's linen or bed-clothes. The same author highly praises rubefacients of lytta or mustard, in bronchitis. Issues are so important, that M. Broussais considers that physician reprehensible who has lost a patient without employing them. He observes, however, that, instead of being of service in *ulterior* stages, they hurry on the fatal event. It is at the point where acute inflammation is terminating in chronic, that issues are peculiarly serviceable. Caustic issues and setons, M. Broussais thinks, are nearly equal in point of utility. He tried cauteries in some cases with success; but does not speak very decidedly on their efficacy.

As in that variety of chronic bronchitis denominated "tussis senilis," the cough and dyspnoea are much aggravated by the redundant and accumulated secretions in the air cells and passages, so emetics, by dislodging these secretions, are useful, as giving temporary relief. They have not, in Dr. Hastings's opinion, much effect "in forwarding a radical cure."

"The digitalis purpurea," says the same author, "does not seem applicable to all cases of chronic bronchial inflammation; but when it assumes the form of catarrhal phthisis, the fox glove, by diminishing the velocity of the pulse, and by promoting a free discharge of urine, often relieves the breast. It is highly beneficial in all those examples in which bronchial inflammation has a tendency to terminate in dropsy, its powerful diuretic effects preventing the accumulation of the exhaled fluids; but when the disease is attended with much prostration of strength, digitalis, even if indicated, must be exhibited with great caution." 303.

Squill "is often serviceable when bronchitis assumes the character of chronic cough." Dr. H. has generally exhibited the powder in conjunction with ammoniacum, as in the *pil. scill. comp.* of the college pharmacopœia, and in old people, without much fever, found it of benefit. "The tincture of meadow saffron appears a very promising remedy in chronic bronchitis, and certainly possesses very remarkable powers.

It allays the cough, promotes the flow of urine, and keeps up a regular alvine discharge." Dr. H. thinks it can be given much more generally than squills, being less irritating, and therefore admissible where there is considerable fever, which, indeed, is relieved by this medicine, as it opens the secretions. Dr. H. usually gives twenty drops thrice a day, unless diarrhoea supervene, when the dose is diminished. If twenty drops produce no effect, it may be increased till the bowels, skin, or kidneys are acted upon. "If there be much quickness of the pulse, the author generally combines eight or ten drops of the tincture of digitalis with that of the meadow saffron; from which combination the cough is often relieved, and the quickness of the pulse is diminished."

Drs. Duncan and Armstrong have lately recommended certain vegetable balsams in chronic inflammation of the mucous membrane of the lungs.

"The latter thinks that the copaiba deserves to be conspicuously placed among the internal medicines, as it seems to exert a specific influence on the mucous membrane. It has failed with the author in producing so much benefit as he was led to hope from Dr. Armstrong's report. Whenever there is much fever, it appears to be increased by this remedy, and it does not always allay the cough, or alter the expectoration. It frequently disagrees with the stomach when given in sufficient doses to benefit the pectoral symptoms, and sometimes a diarrhoea comes on under its use. Occasionally it produces all these troublesome effects without relieving the cough. But this balsam certainly seems to exert an influence on the mucous membrane, although, perhaps, not a much greater one than the squills or meadow saffron. Further inquiry, however, may determine in what respects it is superior and in what inferior to these remedies. In the mean time Dr. Armstrong has done considerable service by bringing the copaiba into general notice." 305.

As the balsam of copaiba is very frequently adulterated, the want of success in Dr. Hastings's hands might have been partly owing to such circumstance.

A pill composed of extractum conii four grains, and pulveris ipecacuanhæ one grain, taken three times a day, often allays the cough, and produces a more healthy expectoration.

"There are some states of the system during the progress of chronic bronchitis in which cinchona may be useful; chiefly in those instances that succeed to acute bronchitis, where the debility brought on by the acute attack is very considerable. In such examples, if the dyspnoea be not increased, the benefits arising from its exhibition are sometimes very apparent. The profuse perspirations and other discharges are not only restrained by this remedy, but it occasionally appears to alter the secretion from the mucous membrane of the

lungs, and thus brings about a more healthy condition of that membrane, by invigorating its blood-vessels and restoring their natural tone. In these cases it may be combined with diluted sulphuric acid, which also tends to restrain the colliquative sweats that so often accompany this disease." 306.

Broussais observes that the cinchona sometimes proved useful; but he asserts that it is dangerous to continue it for any length of time—"parce qu'il n'est point ici le remède spécifique." Pectoral ptisans, indeed, and diluent acidulated drinks with plenty of gum, appear to be the principal internal means which M. Broussais makes use of in this disease.

When chronic inflammation of the bronchia is combined with hepatic affection, Dr. Hastings recommends that "very small doses of calomel, or the blue pill, should be conjoined with the other remedies, and continued till the gums become slightly red, or till the appearance of the dejection is more natural, and the tenderness in the epigastric region is diminished." For the purpose of lessening the quantity of mercury in these cases, Dr. Wilson Philip has strongly recommended dandelion to be combined with it. Dr. Hastings remarks that this last medicine must be given in large doses, when, if the stomach bear it well, the flow of bile is promoted, and a healthy action of the bowels is kept up.

"If chronic bronchitis be combined with slow inflammation of the peritoneum and mesenteric glands, mercury may be carefully administered; but the disease generally resists this as well as every other remedy." 307.

The great utility of calomel in croup would tend to the hope of its being beneficial in chronic bronchitis; but the debility attendant on the latter disease is a strong objection. It is therefore chiefly used where the complaint is combined with abdominal affection.

"There are cases, however, in which it is advantageous in chronic bronchitis uncombined with any disease in the abdomen. These sometimes occur after measles, when the shrillness of the voice indicates considerable affection of the mucous membrane lining the trachea." 307.

Dr. Hastings and M. Broussais give different evidence respecting opium in chronic inflammation of the bronchial membrane. Dr. H. states that this medicine "can only be regarded as a palliative, and from its stimulating effects is often prejudicial, as long as there is much fever." In the chronic catarrh of old people, however, its use is sometimes, he thinks, unavoidable. "In such cases a full dose may be given at bed-time, which will procure some rest in the early

part of the night, before there is much accumulation in the bronchia and air cells; but we must be very cautious in its use, as by preventing expectoration it sometimes proves fatal." *Hastings.*

"Opium," says M. Broussais, "is a precious sedative, when the gastric susceptibility (which we scarcely comprehend the meaning of in this case) will permit its use. If it be combined with ipecacuan powder, it promotes the cutaneous discharge, and suspends the cough for whole nights—an unspeakable advantage in chronic catarrhal inflammation. It is far better to prevent the superabundance of bronchial secretion by opiates and mucilages combined with light tonics, than to be always endeavouring to expectorate it by squills and other acrid medicines, which only injure the already too sensible mucous membrane of the stomach. *Tom. I. p. 154.*

We have always looked upon the operation of opium in this class of complaints as rather preventive of *secretion* than of expectoration; and consequently after the febrile stricture is taken off, as unaccompanied with that danger which physicians so often speak of. Dr. Hastings himself remarks that "in the latter stages of chronic bronchitis, where the quantity of matter expectorated is very large, and the cough very troublesome, there is no remedy so powerful in allaying the uncomfortable irritation about the glottis as opium." He thinks it, however, not always free from inconvenience or danger, even in such cases.

Our readers are aware that Dr. Duncan, of Edinburgh, strongly recommends lactucarium as a substitute for opium, in many cases of pulmonary affection.

"Of all the medicines," says this venerable physician, "which I have employed for alleviating cough in phthisis, and indeed as a sedative in many other diseases, next to opium, I have found no article so beneficial as that substance which some have lately denominated lettuce opium, and which I termed lactucarium."* 308.

In the sixth volume of the college transactions lately published, Dr. Louis Kerckhoffs states, that he administered, with great success, the white willow bark in powder, with sulphur in form of an electuary, to two patients who were apparently in the last stage of consumption, from affection of the mucous membrane of the lungs. Claret and nourishing soups were given at the same time.

For the effects of prussic acid in affections of the mucous membranes, we must refer to our analysis of two publications on this subject, in the present number of the journal.

* Observations on Pulmonary Consumption. By A. Duncan, senior, M. D. 2d edition, p. 162.

In the class of diseases under consideration, an attention to what has been quaintly termed the non-naturals is of more consequence than medicine. The diet must always be bland and unirritating, though it is not necessary to adopt the pure and refrigerating regimen necessary in acute diseases. In the early stages where there is much disposition to general vascular action, milk and vegetables form the proper aliment—in the more advanced stadia, when considerable debility has supervened, a more nutritious diet may be allowed. Cordial stimulating drinks are, of course, always improper.

The air which the patient breathes is of equal consequence with the food. The maxim of Celsus is peculiarly applicable to chronic bronchitis—"pessimum ægro cœlum est, quod ægrum fecit." Change of air often removes the disease when all other measures have failed. It is evident that as vicissitudes of temperature form one of the most frequent causes of the complaint, and are always apt to renew it, a warm and steady climate is extremely desirable. In this country a residence on the southern coast—especially about Penzance, for a few months in the summer, is to be recommended, as it sometimes invigorates the constitution, and restores the tone of the vessels on the bronchial surface, so as to prevent a return of the disease.

"In this climate," says Dr. H. "flannel next the skin during the spring and winter months, by slightly stimulating its vessels, sustains the circulation on the surface, and thus tends to relieve chronic inflammatory diseases of the pulmonary system." 311.

The bowels, of course, are to be regulated, "but purging is not beneficial." We doubt much whether we have not had too great a theoretical dread of purging when the mucous membrane of the lungs is carrying on the process of superabundant secretion. In two or three instances we have lately seen the balance of irritation beneficially shifted from the pulmonary to the gastric membranes, by smarter purgatives than we were formerly in the habit of giving. We throw out this hint for others to act on or not, as they may think proper.

Exercise, where it can be endured, is very serviceable in chronic bronchitis—especially horse and carriage exercise, as well as the swing invented by Dr. Carmichael Smith.

We must pass over a great portion of Dr. Hastings's book dedicated to the record of numerous cases illustrative of the principles which have been here laid down, in order to dedicate a page or two to the last chapter in the work, which treats of dropsy as dependent on inflammation of the mucous membrane of the lungs. Our readers will have perceived that Broussais makes dropsical infiltrations a very common attendant on the ulterior stages of bronchial inflammation—or

rather of the condensations of lung which so often are induced by the disease. Dr. Hastings appears to take a proper view of this pathological phenomenon. He justly considers that the long continuance of the bronchial disorder must embarrass the function of the heart, not only by the mechanical obstruction which will be offered to the lesser circulation of the blood, but also by the non-purification of the blood itself in the lungs.* The appearances on dissection corroborate this supposition.

"The lungs and the right side of the heart are much loaded with blood. The bronchial membrane is always inflamed, its texture often thickened, and sometimes ulcerated. The bronchia and air-cells are usually filled with a frothy fluid, mixed with pus. Occasionally the lungs are otherwise diseased. There is generally a considerable quantity of fluid in the sacs of the pleura, and very frequently the pericardium contains more than six ounces of fluid.

"The heart is in almost every instance enlarged, and sometimes adheres to the pericardium. On examining its internal structure we often find some marks of disease. These in general are but slight, and arise from inflammation of its inner membrane, which produces some degree of thickening about the auriculo-ventricular valves. In some cases the disorganization is much more considerable, these valves being found almost cartilaginous." 382.

No sooner is the structure of the heart, particularly of its valves, diseased, than the venous system becomes congested, and dropsical effusions are the consequence. On the treatment of this variety of dropsy Dr. Hastings makes many judicious observations. He comes to the same conclusions with Dr. Crampton, respecting the indications afforded by the urine; namely, "that he has now forsaken it as a guide to the treatment of dropsy." He wisely observes that "we should rather be directed in the treatment by the state of the functions of the (internal) organs, and general inflammatory symptoms, than depend on the signs shown by any one excretion." He does not venture quite so far as Dr. Crampton in blood-letting, though he evidently approves of the principle. He inclines more towards local abstractions of blood.

"Eight or twelve leeches applied to the chest sometimes do more in relieving congestions about the thorax than several ounces of blood taken from the arm; and the symptoms are thus relieved by a smaller expenditure of the general strength." 397.

Dr. Hastings does not wish, however, to underrate the effi-

* Till the dispute is settled respecting the oxygenation or decarbonization of the blood in the lungs, we might perhaps designate the process—*pulmonization* of the blood.

cacy of venesection. "He believes that in many examples of dropsy succeeding to bronchial inflammation, in which the heart is gorged with blood, and the venous system much congested, general blood-letting, and general blood-letting only, can save the life of the patient." Our author conceives that the indiscriminate use of drastic purgatives in dropsy has been productive of considerable mischief. In the variety of dropsical affection under consideration, these drastic purgatives appear to him inadmissible—excepting towards the close of the disease, when the infiltrations are fast advancing, and suffocation is impending. In such cases they are to be had recourse to for temporary relief. He trusts principally to purgatives of the saline class, given so as to produce a constant laxative effect. The supertartrate of potash is strongly recommended, especially when combined with the tartrate of potash and infusion of senna. In respect to diuretics, the following are our author's sentiments:—

"In this dropsical affection we frequently find that a copious flow of urine almost immediately succeeds the loss of blood, and the swellings occasionally disappear without any diuretic remedies having been employed. This, however, is not common; the more usual result is, that the increased flow of urine does not continue, if the venesection be not followed up by remedies which act on the kidneys. The author has principally used for this purpose the following diuretics,—squills, foxglove, meadow saffron, and crystals of tartar." 401.

With digitalis and squill he frequently combines small doses of the blue pill, especially where any hepatic disease is suspected.

"We are much indebted to those writers who have reprobated the indiscriminate use of mercury in dropsical diseases; but in this variety its administration, if kept within proper limits, is almost always beneficial. After the employment of blood-letting this mineral may not only tend to remove the congestion which invariably exists in the vessels of the liver; its general stimulating properties may also prove serviceable, by exciting the debilitated capillaries of the mucous membrane of the lungs to a more vigorous contraction." 405.

The meadow saffron, he thinks, deserves a fair trial in these cases. "In chronic inflammation of the bronchial membrane, it appears to regulate the secretion, to diminish the cough, and relieve the dyspnoea." It is evidently diuretic, and less stimulating than squills. The supertartrate of potash, however, should never be neglected; its mild saline diuretic and antiphlogistic qualities being peculiarly appropriate to the disease. Great care is necessary in the regulation of the diet, both during pulmonic affection, and

in the convalescence which succeeds. After acute diseases the appetite is generally too keen, for some time, and blood is made too fast. Nothing is more common, in such cases, than relapses, from the weakened organ again taking on disease, especially where tonics are early and injudiciously given after the subsidence of the dropsical symptoms.

It is now high time to close this article, already rather too far extended. The numerous specimens of Dr. Hastings's work which we have laid before our readers, cannot but have impressed them with a high opinion of its own merits and its author's talents. It therefore needs no farther commendation from us, as the importance of the subject, and the ability with which it is handled by Dr. Hastings, will speedily induce the purchasers of select practical works to place the volume in their library, for reference as well as perusal. To our respected brethren on the Continent, especially M. Broussais, and to our able and zealous countrymen, Dr. Harrison and Mr. Alcock, we have been much indebted, in the construction of this eclectic article, and to them we offer the homage of our professional esteem.

II.

A History of the Epidemic Fever which prevailed in Bristol during the Years 1817, 1818, and 1819, founded on Reports of St. Peter's Hospital and the Bristol Infirmary. By J. C. PRICHARD, M. D. &c. &c. Physician to St. Peter's Hospital and the Bristol Infirmary. Octavo, pp. 112, London, 1820.

ALTHOUGH FEVER has subsided, and with it a great deal of the importance recently attached to all investigations of its etiology, pathology, and treatment; yet, as it is not likely that we shall ever have a long immunity from those epidemic influences which spread the disease throughout society, it is the bounden duty of the journalist, in particular, to record every contribution to our stock of knowledge on this interesting subject, not only as an index to future inquirers, but as a dépôt from whence authentic information may hereafter be quickly drawn, upon sudden emergencies.

Dr. Prichard has, for some years, been well known to the profession, and to the literary world in general, by his learned researches into the physical history of man; and therefore we perused this little volume with considerable interest, to learn the sentiments of a man, respecting whose judgment we enter-

tained favourable prepossession. Although Dr. Prichard has not entered so fully into many points of pathology and practice as we could have wished; yet we have been much gratified with what he has thought proper to communicate.

A considerable portion of the volume is occupied with tabular views of the fever, as it showed itself more prominently in this or that organ. The tables also exhibit the duration and event of the disease; with notes respecting its propagation, and any remarkable circumstance connected with particular cases. These documents are valuable and authentic, but must necessarily be passed over in this place, in order that we may make known Dr. Prichard's sentiments relative to the pathology and treatment of the late epidemic fever, to which points he has chiefly confined his remarks on the present occasion.

Dr. Prichard conceives that the near alliance of fever with "the disease which *accompanies* the inflammation of particular organs," is every day more acknowledged by practitioners. We think that no man can doubt the similarity of idiopathic and symptomatic fevers; but many will doubt, and we among the number, whether both these fevers be dependent on the same cause—local inflammation. Neither can we agree with Dr. Prichard that it is a mere matter of curiosity, since we know that important practical indications hinge on the distinction. And here we would beg leave to correct an error into which Dr. Prichard, in common with several others, has fallen—namely, that a certain class of physiologists "avers that the arteries are never capable of any action at all." We would ask Dr. Prichard to point out one single physiologist who maintains such a doctrine! And if Dr. P. be incapable of showing any author who has ever hinted such a doctrine, we think it ought to make him and others a little cautious of allusions to tenets which have no foundation but in imagination or misconception. All we can say is, that our reading has furnished us with no such statements. If Dr. P. alludes to the doctrines of Dr. Parry of Bath, we can safely assert that that distinguished physician maintained that the arteries not only possess a power of action, but that they are constantly exercising this power, so long as life remains, or they themselves continue free from ossification.

We agree with Dr. Prichard that "in that milder form of the disease which is termed simple fever, there is no proof of any local inflammation;" and we nearly coincide with him in his other position, that "fever is only dangerous when it gives rise to, or displays the symptoms of, visceral inflammation." 48. Perhaps, however, this sentiment should be a

little qualified. We have seen fever destroy life, before any sign of reaction, and consequently inflammation, became developed. In such cases we could not say that it is *only* dangerous when it displays the characters of the phlegmasiæ.

Dr. P. observes that the blood, even in simple fever, often exhibits the inflammatory crust.

"The state of the secretions is similar to the condition they assume in the phlegmasiæ; the relief also which is produced by venesection, and by other evacuations, tends to prove that the disease is in its nature analogous to these distempers."

He properly remarks that the mildest fevers are ever liable to be converted into the severer forms, and to exhibit, both in the living and the dead body, unequivocal marks of inflammation in the brain, the lungs, the liver, stomach, or bowels. The following sentiments appear to be a slight modification of Dr. Clutterbuck's theory of fever.

"Simple fever most naturally and frequently degenerates into cephalic; the head is more or less affected with pains, and other disorders in both cases. The seat of these, in the more severe form, seems to be the membranes of the brain; and to the same parts, as well as to the coverings of the nerves, we may, with great probability, ascribe the pains in the head and limbs, which attend the first attack of almost every case of fever. Simple and cephalic fever may therefore be considered as the genuine forms of this disease, the attacks being milder in the first, and more severe in the second. The pneumonic, hepatic, gastric, enteritic, and rheumatic forms may be regarded as varieties." 49.

Dr. Ducamp of Paris, a young physician of great talent and observation, in a late critique on a pamphlet of M. Chomel's relative to fever, seems to think that Broussais, whose doctrine he defends generally, has erred in confining the seat of inflammation in fever to the mucous membranes of the primæ viæ.

"M. Broussais a fait dériver les symptômes ataxiques, comme les symptômes adynamiques, de l'inflammation du tube digestif. Je crois qu'il a eu tort, et qu'il a dans ce cas fait jouer un trop grand rôle aux sympathies. On l'accuse de voir des phlegmasies partout, je vais lui adresser un reproche qui paraîtra fort étrange, c'est de ne pas voir assez des phlegmasies dans les cas de fièvre ataxique, et de considérer comme sympathiques des phénomènes idiopathiques dépendant immédiatement de l'inflammation du cerveau ou ces annexes."

This is coming very near the doctrine of Dr. Mills in this country, and by the way, of Dr. Rush, long ago in America—a doctrine overlooked too long by the European writers.

We shall now collect our author's sentiments relative to the treatment.

In a considerable number of those patients affected with the simple and cephalic forms of the fever, as they presented themselves at St. Peter's Hospital, and the Bristol Infirmary, the disease was still in its first stage—namely, “the period of depressed vital action.” This cold stage he has frequently seen protracted many days, “without any appearance of reaction,” in vagrants and other paupers who had long been exposed to cold and want.

“Occasionally these sunk in spite of all efforts to restore warmth and animation; in other instances, reaction, when it at length took place, was extremely violent, and produced a high degree of inflammation in some of the viscera, speedily terminating in effusion, supuration, or gangrene, and death.” 51.

Here then it is evident that the doctrine which maintains the identity of fever and inflammation, would lead to bad practice. If fever be inflammation, it is as much so in the first, as in any other stage; and ought to demand blood-letting and other evacuations. But practice gives the negative to theory here, as in too many other instances.

The first measure which was adopted at the institutions in question, was to strip the patients, put them into the warm bath, and shave the hair off their heads. While in the bath, they were directed to be well rubbed, with the double view of cleansing the surface, and drawing the blood to the same. They were next rubbed dry, and put to bed, where a draught of warm thin gruel was given them. In some instances, where there was great exhaustion, a little wine was added to the gruel.

“In general there was enough strength remaining to sustain without peril the action of vomiting. When this appeared to be the state of the patient, a gentle emetic dose was given to him, as soon as he came out of the warm bath, consisting of the powder of ipecacuanha, with or without an addition of tartarized antimony. By these means the powers of life were generally roused, and the hot stage brought on, often in a mitigated form. In a few cases the emetic cut short the complaint.” 52.

The foregoing description applies principally to the vagrants received into St. Peter's Hospital: the persons brought to the infirmary were commonly in a less abject plight. In those that were admitted before reaction had taken place, the means above-mentioned were adopted.

“It was during the first accession of the hot fit, that the chief attempts were made to subdue the disease by breaking through the train of morbid actions.”

The symptoms now were, of course, those of strong reaction—a full, bounding pulse—hot, dry skin—parched, white..

furred tongue, soon changing to a browner hue, with intense thirst, and more or less nausea. "But the part chiefly affected was the head; the carotid and temporal arteries pulsed strongly; a dull oppressive pain was felt across the temples, and often severe shooting pains through the head."

An average venesection of ten or fourteen ounces almost uniformly relieved this state of the disease. "A disposition to syncope supervened, sooner than it would have done in a person of the same age and constitution labouring under pneumonic inflammation of the ordinary character." This is a common phenomenon in most fevers, showing that the disease is not essentially inflammation, but the impression of a morbid, and hitherto untangible cause on the constitution, followed by a reactive process, very frequently producing inflammatory action in the most predisposed organ or tissue.

When an approach to syncope took place, accompanied with vomiting, "a surprising degree of relief was, in almost every instance, experienced." When the symptoms returned after a lapse of ten or twelve hours, venesection was repeated, once, twice, or even thrice. "In persons of weak habits, or much exhausted, and in children under ten years of age, instead of bleeding from the arm or temporal artery, leeches were applied to the head." This was done, even in the case of robust persons, when the local affection continued after general bleeding, &c. had been used. In co-operation with vascular depletion, other means of reducing arterial action were employed. The head was shaved, and wetted with cold water; the body was sponged with the same. Cold affusion did not prove very servicable:—the constant application of wet clothes, or frequent sponging, was a more efficacious method of abstracting heat.

The medicines administered were chiefly purgatives. "Five, six, or eight grains of calomel, with a moderate proportion of jalap, when the stomach was not irritable, were first given; if there was nausea or sickness, the calomel was ordered alone or in pills with the compound extract of colocynth. This dose was followed by a purgative draught of infusion of senna with sulphate of magnesia, which was repeated every third, fourth, or sixth hour, according to the effect produced. The doses of calomel were afterward repeated, without the powder or extract; the patient was freely purged for several days, and a very open state of the bowels maintained through the whole course of the disease."

This was almost uniformly the treatment in cephalic or simple fever; and in almost every instance, where the constitution of the patient was not impaired by habits of intemperance, or chronic maladies, the disease was speedily dis-

armed of its violence and danger. 'In a great proportion of cases the fever was cut short, and where this did not happen, its influence on the constitution was so much reduced, that the symptoms gradually declined afterward, and the patient became convalescent in eight or ten days. When, however, the disease had crept on slowly, or got a fast hold of the constitution, before medical means were put in force, "the attempts to interrupt its course were seldom found to be successful." The measures then adopted were, of course, to obviate symptoms.

In cases complicated with thoracic and abdominal inflammation, the treatment underwent such modification as the structure and function of the seat of lesion obviously indicated, and need not be detailed here. The most unmanageable forms of fever were those where the mucous membrane of the stomach or bowels was inflamed; the former attended frequently with cholera, the latter with diarrhœa or dysentery. Here blood-letting could not be carried to the same extent as in the other modifications of fever. When drawn, however, the blood exhibited the buffy coat. One venesection was generally sufficient, after which leeches were applied to the epigastrium, or other part of the abdomen affected. To these were added the warm bath and fomentations, with blisters, effervescing draughts, opium, &c.

"But a more effectual relief was generally obtained by a few doses of calomel, containing five or six grains, in pills, combined with some of the resinous cathartics, or followed by a dose of ol. ricini, or the infusion of senna, with sulphate of magnesia, and repeated at the intervals of six or eight hours." 62.

Where neglected cases had degenerated into real typhus, the treatment was nearly the same, excepting that our author seemed to depend a good deal on the specific as well as purgative effects of calomel.

"The immediate effect of calomel upon the excretions was considered as a most important result of its use, but it was not the only one which was deemed a favourable indication. When it affected the constitution in that way which is manifested by soreness of the gums, and a disposition to pyalism, it was, in a majority of cases, found that a gradual remission of the most formidable symptoms had taken place; the secretions became more natural in appearance; the alvine discharge of a better colour; the skin softer, and more perspirable." 68.

Evacuations of blood from the bowels were not always a fatal symptom. Even in these cases wine and stimulants are generally improper, and the antiphlogistic treatment must be pursued. Dr. Prichard saw one case of profuse hæmorrhage from the intestines happening in the course of

fever, where a few doses of the tinct. ferri muriatis (30 drops every hour) arrested the flow of blood. Dr. P. thinks, however, that the tinct. lyttæ is one of the most efficacious remedies in cases of internal hæmorrhage. We have found opium and superacetate of lead the most powerful restrainers of internal hæmorrhages.

“The use of wine and stimuli were (was) many times tried in those cases which have been supposed to call for such remedies, but they were always given with the caution which an experiment required, and generally abandoned on being found to be prejudicial.” 73.

Dr. Prichard lends his testimony to that of the many others who believe that fevers arise sometimes from contagion, sometimes from an incognizable atmospheric influence; and that, in either case, they may be propagated afterward, from person to person, under certain deficiencies of ventilation, &c. &c. or under strong predispositions. This, our readers well know, is the prevailing doctrine of the best informed of the present times.

We have now exhibited a pretty full analysis of Dr. Prichard's work, which is calculated to impress the reader with a very favourable idea of our author's talent for accurate observation and judicious discrimination.

III.

Medical Transactions published by the College of Physicians in London. Volume the Sixth. Octavo, pp. 426, three plates. London, 1820.

THE desire of *communicating* knowledge appears to be as strongly and instinctively implanted in the human mind, from the earliest infancy, as that of *acquiring* the same. We see the child fly to its parents or companions to impart the newly-acquired idea or information; and in every stage of existence, from the cradle to the grave, we find that nothing but avarice, fear, or some base passion, can prevent man from freely communicating to others, what may have cost himself years of laborious study or research to ascertain. This is certainly no unfavourable trait in the human character; and in no class or profession is it more conspicuous than in the practitioners of medicine, where, at the same time, the most powerful temptations and inducements exist to deface it. The formation of societies, and the publication of trans-

actions, through the medium of which, each individual may contribute that which has most attracted his attention or occupied his thoughts, are of incalculable service to the general progress of the healing art. They prevent the unnecessary multiplication of books, by giving an easy vent to facts, observations, or essays, which might otherwise expand into separate volumes, without any increase of solid materials; while, at the same time, they rescue from oblivion, or the narrow circle of individual possession, many valuable facts and suggestions which, but for these accessible vehicles of record, would inevitably perish. Volumes of this kind must necessarily be very unequal in themselves, since chance and a thousand fortuitous circumstances operate on the nature, as well as on the current of the communications that compose them. Nothing then, in our opinion, can be more unfair than to estimate the general character of a work of this description by the insulated articles of a single volume—and still less justifiable is it to measure a contributor's genius, talent, or information, by the importance or magnitude of a detached paper that is but little calculated to afford any criterion, pro or con., of a man's ability, judgment, or experience. Such, however, is by no means an unusual practice in this Athenian age of colloquial criticism, where we exercise the noble liberty of speech and press with unbounded latitude.

A volume issuing from the Royal College of Physicians, the highest constituted body in the profession, endowed with chartered powers, high privileges, and distinguished rank, offers a prominent object for the eulogies of friends, and the aspersions of enemies, besides affording a prolific topic of criticism for the gossips and small wits of the profession. It is not, however, for the zealous and unbiassed cultivator of medical science, or the humble inquirer after truth, wherever that may be found, to mingle party spirit with his pursuits, or suffer the distorting medium of prejudice to come between him and the objects of his research.* On this account, we shall adhere, with more than usual rigour, to the analytical line of our policy, conscious that under existing circumstances, our criticisms would, by one party, be con-

* In truth, we conceive that the character of the college, as a body, is no more concerned in the character of a volume of the transactions published under its auspices, than our own character is involved in that of the works which we happen to analyze for our journal. If a council of the college superintend the publication, and if that council admit bad papers and reject good ones, then the judgment or impartiality of the council may be impugned. In no other way, we imagine, can the college be concerned in the work.

sidered *presumption*—our commendations, by the other, *adulation*. In laying an impartial portrait of each article before the reader, however, we shall occasionally hazard a practical remark or observation, which we trust will be received in the same spirit of candour with which it is delivered. “*Interea vero, quicquid falsi vel incerti eidem insit, si artem medicam promovere cupimus, firmoque et perenni fundamento stabilire, refellere et corrigere decet, probe memores, sapientiam esse primam, stultitia caruisse.*”*

The volume before us contains sixteen articles, and we shall take them in the order in which they stand.

I.

History of a Case of Strangulated Hernia, successfully treated by the application of ice, after the attempt at reduction by the taxis had failed. By G. D. YEATS, M. D. F. R. S. Fellow of the Royal College of Physicians, &c.

THE great danger to be apprehended from the incarceration of a portion of intestine or other internal part, is inflammation and its consequences. The *obstruction* to the fæcal passage is quite a subordinate consideration, excepting as it may increase the inflammation. Cold has a great effect in restraining this inflammatory tendency, not only by constricting the vessels, but depressing the nervous excitement of the parts. It is therefore very generally employed in aid of the *taxis* by our best surgeons. The case related by Dr. Yeats was a young man, ætat. 18, who was seized with sickness, vomiting, and great pain in the right groin and back, on the morning of the 16th March, 1807. Dr. Y. saw him in two hours after, and found a considerable swelling in the groin, protruding into the scrotum, “produced by a strangulated hernia of the congenital kind.” It was extremely painful to the touch, and very tense, with great soreness over the abdomen. The countenance was pale and sunk, the pulse 100, full and hard, with thirst and restlessness. Twelve ounces of blood were taken from the arm; twelve leeches were applied to the tumour, and the bites encouraged to bleed by fomentations. By these means he obtained great relief. Five grains of calomel and one of opium were exhibited, and one grain of the former directed to be given every hour afterward. When

the flow of blood by the leeches had ceased, pounded ice was applied to the tumour, and in the afternoon a clyster was administered, which brought away some fæces. "The pain was by this time mitigated, and the inflammation and tumour were certainly less, so that he could lie horizontally with comfort." Mr. Macklin, state surgeon to the Lord Lieutenant of Ireland, was now called in, and attempted the reduction of the hernia, but without success. A grain of opium was directed at bed-time, and the calomel and ice to be continued as before. On the following morning the pulse was calmer, and the countenance improved. The tumour also was diminished in bulk, and the abdominal tension almost entirely gone. The same remedies were continued, and a purgative clyster ordered. "In the evening the clyster had produced a feculent evacuation, and by bed-time the hernia had returned into the abdomen with the testicle also." The testicle descended the following day; and as soon as the hernia was decarcerated, two or three spontaneous feculent evacuations took place.

Dr. Yeats makes several practical remarks on the utility, abuse, and action of cold, in strangulated hernia, which deserve the surgeon's attention. He properly disapproves of purgatives given by the mouth, before the obstruction is beginning to yield, and even then they are seldom necessary. "The administration, however, of laxative clysters is obviously required." They should not, Dr. Yeats thinks, be made with acrid ingredients. He directs the submuriate of mercury in small doses of a grain, frequently repeated, "with a view to its relaxant effect, which it powerfully exerts when it effects the constitution." We shall conclude with the following extract from this intelligent physician.

"I may here mention, although I cannot now urge the reasons in detail, that I have almost uniformly found the combined exhibition of submuriate of mercury and opium, one of the best means of arresting the progress of inflammation, especially under circumstances when that morbid condition continues after repeated general bleeding, and when it seems to bid defiance to all you can do, by lessening the general momentum of the blood. In ileus, acute rheumatism, pleurisy, and all purely inflammatory diseases, this combination, not omitting, of course, depletion, has pretty faithfully served me." P. 15.

II.

Some Observations upon Paraplegia in Adults. By MATTHEW BAILLIE, M. D. F. R. S. L. and E. Fellow of the Royal College of Physicians, &c. &c.

THERE is not a more difficult point in pathology and practice, than that of ascertaining the actual seat or cause of disease. An irritation in one part will cause pain or some morbid phenomenon in a distant part, and these deceptive manifestations are not obedient to any hitherto ascertained law of the animal economy. An irritating body or secretion in the digestive organs will, in ten different individuals, exhibit ten different effects, in kind as well as situation. We have at present no law by which we can accurately trace the chain of causation; and therefore our great business is, to collect facts and observations, as a basis for future medical legislation.

The experience and knowledge of a man in our profession, are generally in an inverse ratio to the boldness of his conclusions, the absoluteness of his dogmata, and the positiveness of his assumptions. The personal conduct and public writings of Dr. Baillie afford an excellent commentary and illustration of this text. Cautious in his practice, guarded in his prognosis, candid in his opinions, and, what is more estimable than all—charitable towards the failings and discrepancies of his brethren, this veteran physician offers an example for the humble to admire, and the proud to imitate. We know that in stating these sentiments, we but re-echo the general voice of the profession; yet we deem it our duty to do so, (not from any private feeling, for we owe Dr. Baillie nothing but the homage of our public esteem) because we believe that moral worth, in the higher ranks of the profession, conduces not less to the vital interests of that profession than splendid attainments. The cry for reform has been long and loud in medical society; but we apprehend that the great subject for reformation is our own conduct towards each other. The work must begin at home. When we determine to do strictly unto our brethren as we would be done to by them, harmony and unanimity will prevail, and the science will rise in public estimation. This is the line of conduct which a Baillie has pursued; and it is that which every member of the profession may pursue.

Our experienced author conceives that paraplegia has "increased considerably in this country within the last fifteen or twenty years," for which he is unable to assign a satisfactory reason. The paraplegia of adults, Dr. Baillie observes,

has been considered by most medical men as being produced by some disease, "either in the bones or ligaments of the spine, or in the cavity of the spine, most commonly at the loins, independently of any disease in the brain."

"In adults, however, where there has been no accident affecting the spine by outward violence, paraplegia, I believe, depends most commonly, in a great measure, upon a disease affecting the brain itself." P. 17.

Dr. Baillie is joined in this opinion by Sir Henry Hallford, Sir James Earle, Mr. Copeland, and some others of his friends. We conceive that our continental brethren have taken a pretty similar view of the pathology of this distressing disease. They consider it to result from something which interrupts the nervous energy from flowing along the spinal cord to the nerves of the lower extremities.

"Il en résulte que les mêmes causes qui produisent la paralysie en général, sont susceptibles de donner lieu à la hémiplegie elle-même."*

We need not state that the general causes of hemiplegia are pressure on the brain. In the paraplegia of adults Dr. Baillie observes that we can rarely detect any external mark of disease in the lumbar region of the spine, although thickening of the theca vertebralis, serous effusions, or other organic changes, may, and no doubt do, occasionally, take place. Still he thinks that these causes less frequently produce the disease than has been imagined, and that pressure on the brain is the more usual agent.

"In such cases the diseased condition of the brain may immediately affect a portion of the spinal marrow, and its nerves, in the same manner as it affects the nerves of a lower limb in hemiplegia; or if there be effusion of serum between the membranes of the brain, which is a very common occurrence, a portion of the serum may fall into the theca vertebralis, and press upon the lower part of the spinal marrow."† 19.

Paraplegia occurs most commonly at and after the middle period of life, and oftener in men than in females. Some affection of the head usually precedes and accompanies the disease, as pain, giddiness, drowsiness, impaired vision, defective memory. Occasionally there is numbness, or other indication of approaching paralysis in the upper extremities,

* Dict. de Sciences Med. Vol. 59, p. 277.

† The French include in the etiology of paraplegia, irritation of the spinal marrow, whether idiopathic or resulting from gouty or rheumatic metastasis; also its sympathetic affections produced by derangement in the stomach and bowels—a very common cause say they.

without any appearance of disease in the cervical part of the spine. The paraplegia creeps on with, at first, a stiffness or awkwardness in the motions of the limbs, increasing to a want of power to preserve the due balance of the body without the assistance of a stick. As the disease advances the stream of urine becomes more and more feeble, and at length passes away involuntarily. The bowels are generally constive, and at length, from a want of power in the sphincter muscles of the anus, the fæces are evacuated unrestrained by the will. Patients in this state sometimes live for years; but more commonly the symptoms increase gradually, and the constitution becomes exhausted. In a few instances recovery takes place.

In one of the most strongly marked cases which Dr. B. had ever seen, the bones of the skull, more especially at the sutures, were more vascular than usual; the dura mater was natural; the vessels of the pia mater were very much loaded with blood, and there were effusions of serum between the different membranes of the brain on both sides of it. The tunica arachnoides was opaque and much thickened; the substance of the cerebrum was considerably softer than natural. About four ounces of water were found in the lateral ventricles of the brain, and a considerable quantity of water was discharged from within the theca of the spinal marrow.

Dr. Baillie thinks it not improbable that, in those cases of paraplegia in which the brain is diseased, the morbid affection extends to both hemispheres.

In respect to treatment, our author found those means most successful which were directed to relieve the head, viz. cupping the nape of the neck, leeches to the temples, blisters to the nape of the neck, setons, &c.

“The internal remedies which I have used with most advantage are calomel, or the pilula hydrargyri, combined with squills, together with purgative medicines. A grain of calomel, or five grains of the pilula hydrargyri with one grain of dried squills, have been directed to be taken every night for many weeks. The purgative medicines have consisted chiefly of neutral salts, and sometimes of pills composed of the extractum colocynthidis compositum, with an addition of jalap.” 25.

In a few instances advantage was derived from friction of the lower extremities with the hand, for an hour twice a day. In one case electric sparks drawn from the lower limbs produced much benefit. In those cases where the paraplegia evidently depends on disease of the bones or ligaments of the spine, the foregoing treatment, of course, does not apply. Where lead is the cause, the Bath waters have been found peculiarly serviceable.

M. Chamberet, who has written an article on paraplegia, in the *Dictionnaire de Sciences Medicales*, very properly observes that the farrago of heating and stimulating remedies, used formerly in paralysis, must have done much mischief. He recommends cupping and leeching the spine, while counter-irritation is kept up at a distance, to draw the irritation from the brain and spinal marrow. In the mean time, as many cases are purely symptomatic of gastric and other derangements of the abdominal viscera, he judiciously directs the attention of the physician to the remote source of the malady, rather than to its apparent seat. These observations coincide with, and corroborate the opinions of our own illustrious pathologist, as delineated in this analysis of his paper.

III.

Observations Medicales. Par Jos. ROM. LOUIS KERCKHOFFS, M. D. &c. &c.

THE first of these observations, is a memoir and some cases of plica polonica, which, however, we shall not stop to analyze, as it is a subject but little interesting to the British practitioner, and our principle is invariably to select what is *most* useful. We may remark, *en passant*, that our author comes to the conclusion that the disease in question is entirely owing to want of cleanliness, together with the habit of wearing the hair long and constantly covered, so common among the lower classes of the Polonese. This opinion is contrary to that of the best Polish Physicians. We shall therefore leave the doctors to settle the dispute. The second section is on the subject of willow bark in "phthisie muqueuse." This we have touched on in our eclectic article in the present number of the journal. The third section is written in Latin, and contains the case of a soldier poisoned by the acetate of lead. The quantity taken, and the time of taken the poison, are not stated. The symptoms were constipation, anorexy, great lassitude and debility, distention of the abdomen, followed by retraction of the same, sense of suffocation, nausea, convulsions, cold sweats, trismus. The stomach was found inflamed, and some portions of the mucous membrane macerated, especially about the pylorus. Spots of inflammation were also observed in the œsophagus, duodenum, transverse arch of the colon, pancreas, mesentery, liver, &c. About six ounces of a dark-coloured liquor were found in the sto-

mach, which, on chymical examination, was found to contain acetate of lead.

In the 4th section is an opinion respecting the origin and prevention of hospital gangrene. Our author is convinced that it owes its existence to the same morbid miasm which occasions putrid fevers, and that it is to be prevented by scrupulous attention to cleanliness in the beds, &c. of the wounded, and free ventilation.

The 5th section or observation is on scabies, which Dr. K. has long been in the habit of curing by a solution of muriate of soda two ounces in a quart of infusion of *arnica montana*, which is prepared by pouring two pints of boiling water on four ounces of the flowers or roots of *arnica*. With this liquid the affected parts are to be washed three or four times a day. In the 6th section Dr. K. strongly recommends fomentations of hot water containing carbonate of potash, in cases of *whitlow*, especially when suppuration has evidently commenced, and the proper incision has been made. We do not consider the addition of the alkali as of any great importance.

The latinity of these articles has been objected to by some of our classical friends. To us the language has clearly conveyed the author's meaning, and beyond this we do not look, in the simple narration of facts or observations.

IV.

Description of an unusual Appearance in the Viscera of an Infant. &c. By HENRY JAMES CHOLMELEY, M. D. fellow of the Royal College of Physicians, &c.

THE infant was observed to be very sallow on the day after birth, which appearance daily increased till it became completely icteric. The meconium was scanty, but of the usual appearance. An emetic brought away some dark green bile, and the yellowness of the eyes and skin diminished. The stools continued white and pasty, the urine of a deep hue. At the end of five weeks, during which the jaundice continued, an attack of convulsions terminated the child's existence. The infant took the breast freely while it lived; but vomited up what it took. The bowels were seldom moved without medicine. On dissection, the liver was found of a natural size, but of a green hue throughout its substance. The gall bladder was totally wanting, there being only a narrow impervious cord in its place, with a small knot at each extremity. The pancreas was enlarged and indurated, so as to obstruct the

egress of bile from the liver to the duodenum by the ductus communis choledochus. This circumstance prevents our gathering any thing from the case relative to the use of the cystic bile ; since all the phenomena recorded might readily be attributable to the interrupted course of the bile generally into the intestines. The case clearly shows, however, the importance of the biliary secretion, and the effects of its obstruction.

V.

Remarks upon the Effects of a Warm Climate in Pulmonary Consumption, and some other diseases. By H. W. CARTER, M. B.

Dr. Carter's observations on this subject, are very congenial with those lately promulgated by Dr. Clark of Rome, whose work we reviewed in the 8th number of our quarterly series.

Dr. Carter thinks, and with reason, that persons labouring under pulmonary affections are too indiscriminately advised to a warm climate. They are often sent out when their complaints are hopeless, to pine and die in a foreign land ! On the other hand, "the very first appearance of affection of the lungs, should be attended to ; and, provided there be any predisposition to consumption in the patient, and his circumstances be such as to render a journey to the South practicable, a mild climate should be recommended without delay." Our author properly observes that it is much better that the patient should be frightened, than lulled into a false security. He has seen decided advantages from a warm climate in incipient phthisis. But invalids, he remarks, are not to imagine that a single winter's residence abroad will be sufficient to restore to health a person whose lungs are affected. It will often be found necessary to continue several years out of England—in some instances, the whole of the person's life. He has known some fatal consequences from returning prematurely to England. From all Dr. Carter has been able to learn, "it is only in cases of incipient phthisis that a warm climate is of any advantage."

"When the disease has assumed a marked character, when there is much cough, with purulent expectoration, flushing, and a frequent pulse, and emaciation, I believe that climate never effects a cure, and very seldom prolongs the existence of the sufferer." P. 64.

In such cases, indeed, we ourselves and many others have seen the disease hurried on, as the warm latitudes were ap-

proached. M. Risso, a gentleman of Nice, is now employed on a work to prove that residence on the *sea-coast* is injurious to consumptive patients. We suspect that the disadvantages are owing to something in the topography of the place; rather than to its vicinity to the sea. No example of recovery from confirmed phthisis has occurred at Nice, by our author's account—nor in many other places, we fear! Yet he says the climate of Nice is as good as that of Lisbon or Naples, while it is superior to that of Marseilles or Montpellier, where patients suffer much from the north and north-east winds. And, as it is pretty evident that climate has no power in checking phthisis, after it has passed the first stage, it is to be remembered that the distress, occasioned by travelling under such circumstances, must generally aggravate the symptoms. "More mischief is done by the journey than the finest climate can repair." Besides, if the patient do struggle through the winter in Italy or the South of France, he is obliged to move again in the summer, to avoid the intemperate heat; and thus travelling soon becomes irksome to an invalid, especially where the accommodations are so bad as in the countries in question.

In the *early stage* of phthisis Dr. Carter thinks there can be no doubt of the service derived from a sea voyage, the sickness thereby induced being probably more efficacious than that from medicine. In confirmed phthisis, however, whether the sea air be injurious or not, the sickness exhausts the patient without alleviating his complaint, while the tedium and discomfort of a ship render a voyage almost as bad as a journey by land. In short, our author thinks, and so think we, that "persons in confirmed phthisis should never quit their own country."

A warm climate being allowed to be useful in incipient phthisis, the next point to ascertain is—the most eligible residence. Madeira, our author believes to be the finest climate in the world. We much doubt this. But there are many objections, particularly the mountainous nature of the country, rendering it almost impossible for the invalid to take proper exercise. In Spain, Barcelona and Malaga, Dr. C. thinks are good winter residences, if the patient can make up his mind to see few of his countrymen, and meet with little to amuse or interest him. At Lisbon the weather is often so cold and rainy, in winter, that it cannot be recommended. Marseilles Dr. C. considers an improper place. The sun is powerful, while the north wind, when it blows, is piercing cold. What is worse than all, the changes of temperature are sudden and great. The same observations apply to Montpellier. The sea wind is said to be so loaded

with moisture, that when it prevails "the furniture and beds become excessively damp." Hyeres, Dr. C. thinks, is probably the best residence in France, as to climate; but there are many objections to it. It is poor—affords but very indifferent accommodations—no society—nor medical assistance that can be relied on. Florence "is decidedly a bad winter residence." "The climate of Rome is not to be compared with that of Naples, which is, indeed, delightful." The only objection is the Scirocco, or southeast wind, which in summer is very oppressive, but in winter bearable.

"The scenery around Naples never ceases to be interesting: and the general fineness of the weather, and facility of conveyance from one place to another, enable an invalid to procure much instruction and amusement without risk or fatigue." P. 78.*

Upon the whole, our author thinks Naples an eligible winter residence; yet if the fascination of scenery and the interest of the environs of Naples be put out of the question, our author would give the preference to Nice above every other part of Italy with which he is acquainted. The walks and rides about the town are as varied and pleasant as can be desired, and the botanist and geologist may gratify their curiosity.

But wherever the invalid may fix his residence, there are certain precautions, which he should always bear in mind. He must not trust too much to the mildness of the weather, and throw off too hastily those clothes to which he has been accustomed. He ought not to be out late in the evenings. The invalid should not expose himself to the sun, and then stand in the shade; between which, in all warm climates, a great thermometrical difference prevails. He should not expose himself to the prevailing winds. In his diet he should be cautious; for although the wines are very pleasant, and not so heady as our own, they are obviously improper where the lungs are weak. The high-seasoned dishes, so common abroad, are to be avoided, as well as the sauces of which the French and Italians are so fond. The fruits of the South, however, are wholesome and refreshing, especially if taken before dinner.

Neither Naples, Nice, nor any of the places enumerated by our author, are considered by him as proper summer residences for the pulmonary invalid; "some of them

* It may not be improper to say that, in Dr. Miln, resident physician, at Naples, (a gentleman to whose professional character we can speak from personal knowledge) the English invalid will find a countryman, in whom he may place the fullest professional confidence.

being extremely unhealthy, and all of them too hot at that season."

"In the early part of the summer, perhaps, the banks of the Lago Maggiore, or of the lake of Como, or some spots in Tuscany, or Grasse in France, might be selected; but in July, and the two following months, the heat is too great even at these places; and it will be adviseable to move to Geneva, or somewhere in the neighbourhood of that town. There are several spots near Geneva which are reckoned very healthy, and where the climate is good in summer. Mornex is one of these. About the commencement of October the patient may return to Italy or the South of France." 86.

If the winter residence have been Lisbon, the patient should move, as soon as the hot weather sets in—say to Cintra, for example, where the country is eminently beautiful, and the air always cooling and refreshing.

Our author makes a few brief remarks, in conclusion, on the influence of a warm climate on some other diseases besides pulmonary complaints. Over gout he has seen climate exert a powerful influence. One striking instance of which he relates. A patient inherited a predisposition to, and was early and universally affected by, the disease. He was nearly deprived of the power of walking, and his stomach had become seriously deranged. During this gentleman's journey from England he experienced a severe attack of atonic gout, which confined him for several weeks. He arrived at Nice late in the autumn, and greatly debilitated, with much derangement of stomach and bowels. At Nice he continued a considerable time, and recovered not only the power of walking, but the healthy tone of his digestive organs. Chronic rheumatism and asthma are slightly noticed as being benefited by a warm and equable climate. Dr. C. informs us, that it is now fashionable to send patients abroad for deafness; but this disease has not appeared to be in the least benefited thereby.*

For further information on this subject we refer our readers to Dr. Clark's very interesting little work on climate, which should be recommended to every patient before he parts from England, as containing many valuable remarks and much important information, touching his convenience as well as health. The extent to which we have carried the analysis of this article, will show our estimation of its utility, as well as our respect for its worthy author.

* We suppose it will soon be necessary to send patients to Italy, or the South of France for blindness, corns, warts, &c.

VI.

On the Medicinal Properties of the Solanum Tuberosum, or Potato Plant. By JOHN LATHAM, M. D. F. R. S. the President.

WE have many medicines, but few remedies. Of the former, many are expensive exotics, as opium for example; and therefore it would be exceedingly desirable, both in point of economy, and to check the inducements towards adulteration, if substitutes, of easy access and cheap materials, could be procured. This is leaving out of the question the chance or hope of discovering useful properties in the new articles investigated.

The potato, being a species of solanum, might be conceived, as Dr. Latham observes, to possess qualities analogous to others of that class; "but experiments to ascertain the fact had hitherto been wanting to fix its character as an article of materia medica." Accident led Dr. Latham to ascertain the narcotic powers of this plant on the human body, and he thinks the effects produced in the following cases "will perhaps entitle it to a rank of no mean estimation in the catalogue of medicines."

From about seven pounds of the leaves and stalks, Mr. Hume, of Long Acre, prepared for Dr. L. nearly a pound of extract, in the taste of which there was nothing peculiar that might prove disgusting to the patient. The dose, at first, was half a grain three times a day, which was soon raised to two grains at a dose.

The first patient to whom Dr. Latham exhibited the medicine, and by whom he ascertained the dose, laboured under cough, with mucous expectoration. "As much relief was obtained as might have been expected from the extract of conium, under similar circumstances. No distress was felt in the system; but the patient imagined that his bowels were rather more relaxed than was usual with him."

The second was a very old case of rheumatism, with distortion of the limbs, articular nodosities, chronic cough, and at times intolerable headach. While taking the smaller doses of the extract, the patient felt something like the tremor and disturbance sometimes produced by digitalis. The solanum was therefore suspended for a few days and again renewed. The dose was now gradually increased to a grain every six hours, and, in a few days, to two grains, with directions, should stupor or tremor come on, to discontinue the medicine. The tremor did come on, and the dose was

omitted once. It was then resumed with considerable advantage, the cough and other painful affections being much alleviated. Three grains of the extract with one of rhubarb were now ordered three times a day; "and after an interval of three days I found her still freer from pain, and more comfortable, as she expressed herself, than she had been for several months." A few days afterward, however, the tremor, with much headach, recurred and continued for some time. These went off by a dose or two of rhubarb.

The third case was that of a lady who had a small calculus lodged in the ureter. She was ordered three grains of the extract three times a day, from which she experienced much relief. In four days the piece of gravel passed into the bladder, and was afterward voided. She was soon quite well.

We shall pass over the two next cases, as not very satisfactory, to notice the sixth, which we shall quote entire.

"A young gentleman, about twenty years of age, had been afflicted with almost constant cephalalgia for two or three years. Various had been the means employed to procure relief, without any sensible advantage; bleeding, cupping, leeches, blisters, purgatives, antimonials, mercurials, &c. had successively been tried, and afforded not the least benefit. I put him also upon several plans without any permanent relief; conium with submurias hydrargyri, steel with aloetic preparations were tried. The rectified oil of turpentine was then given in the dose of an ounce and a half at once. Some remissions were certainly experienced for an hour or two in the day, and after the turpentine, for a whole day, but then the pain recurred as usual. I now directed three grains of the extract of solanum three times a day, having indeed about a fortnight before given him the smaller doses of one grain without any effect. After having tried the solanum in the increased dose for a week, he came to me in a much improved state, not having had any pain for a longer time than half an hour in the day, and that in a greatly mitigated degree. In a few days, however, the pain returned, and I directed the dose to be gradually increased to six grains. He could not go beyond five grains, for after each dose considerable stupor was produced for about two hours, when the pain returned, although in a less degree. He was now desirous of returning into the country, where I recommended him a plan of decoct: aloes with chalybeate wine." 102.

The last case was one of supposed angina pectoris from water in the chest, or perhaps organic disease of the heart itself. Under the use of the solanum tuberosum, "his pulse certainly became regular, and he thought himself better, as he had been able to call upon me with less difficulty. He felt the same tremors from its use as were observed in other cases." 103.

Dr. Latham declines detailing several other cases, as the results were very similar to those here stated. A medical

friend of his has already advanced the dose to thirty grains at a time, in a case of cancer of the uterus. Dr. L. concludes thus :

" I am unwilling to say more about the *solanum tuberosum*, lest I should hereafter be found to have said too much ; but I think it superior to *hyoscyamus* and *conium*, and therefore with confidence recommend it to my professional brethren, not only in cases where those medicines have been most commonly employed, but generally in all chronic cases where there may be excess of painful irritation or irregularity of action." 104.

We hope those of our brethren who are attached to public institutions, will give this medicinal substance a fair trial as to its narcotic powers, in consequence of Dr. Latham's recommendation.

VII.

On certain painful Affections of the Intestinal Canal. By RICHARD POWELL, M. D. Fellow of the Royal College of Physicians, &c. &c.

Dr. Powell justly observes, that a knowledge of the causes of disease is always desirable, but not seldom obscure. Every attempt then to establish the relations between cause and effect, is deserving of attention, and will receive it from the profession.

" Whenever," says Dr. Powell, " violent pain takes place in the epigastric region of the abdomen, exacerbating in paroxysms accompanied by sickness, yellowness of the eyes and skin, and urine, by clay-coloured fæces, and without any proportionate increase of action in the circulation, biliary concretions are supposed to be forcing through the ducts ; and when these symptoms abate, it is inferred that their passage into the duodenum has been effected."

It is usual, as Dr. P. observes, to examine the stools upon these occasions, though the search is often ineffectual. The biliary concretions, however, are thought to escape, or to be dissolved after they are freed from the biliary ducts. It is Dr. Powell's object in the present paper, to show that the symptoms usually ascribed to the passage of biliary calculi " are also referable to another cause." And as in the case of biliary concretions, we may naturally expect a repetition of attacks, and no very speedy termination of the patient's sufferings, so, on the contrary, Dr. Powell conceives that " the sort of attack to be here described is more isolated, and when once it has passed, its recurrence is by no means equally to be dreaded as is that of the former."

When our author has suspected the passage of biliary concretions, he has directed the usual large pan to be filled with water, and the fæces to be stirred in it, after which the water has been left to rest long enough to ascertain whether the concretions, as they often do, have risen to the surface. This water he pours off, and repeated similar affusions are made, time being allowed for subsidence between each. The residue is then to be examined. This residue, in the cases to which Dr. Powell refers, "has exhibited a large quantity of flakes mostly torn into irregular shapes, and appearing to have formed parts of an extensive adventitious membrane of no great tenacity or firmness. In the first case that came under Dr. Powell's notice, this membrane was passed in perfect tubes, "some of them full half a yard in length, and certainly sufficient in quantity to have lined the whole intestinal canal." In the others also, the aggregate quantity has been very large, and continued to come away for many days, in irregular thin flakes, of but one or two inches in extent, and not perfectly tubular. Dr. P. has definitely examined four such cases, in all of which the leading symptoms led him to suspect the passage of biliary concretions at the time. They were all adult females. In but one of these our author had been consulted for *previous* ill health.

"She had frequently suffered from occasional pain in the intestines, and derangement of her powers of digestion, with flatulence, and a sense of suffocation. She was always relieved, at the time, by mild opening medicine, and believed herself able to prevent the attacks of pain from increasing to any serious degree of violence, by repeating it according to circumstances. A similar history of liability to frequent recurrence of pain, accompanied by indigestion, was related to me in the other instances. The more violent seizures under which I saw all the patients, consisted in a sudden and excessive pain in the epigastric region, increasing in paroxysms very frequently, rather relieved by pressure of the patient herself at the time, but leaving great soreness and tenderness during the intervals. This state continued under four days; during it the stomach was very irritable, and the tongue coated and clammy. Jaundice came on at an early period, and the stools were white, brown, or somewhat greenish, and streaked in colours, until the films began to pass, when they were mixed with a full sufficiency of bile, but not at first of a healthy colour. The pulse throughout was calm, moderate, and natural, in none of the instances amounting to 90." P. 112.

There was no indication of inflammation. In one instance Dr. Powell noticed a considerable hardness and contraction of the abdominal muscles; in another case there was super-added to the above symptoms a difficulty in passing the urine, with pain in the region of the bladder, requiring the use of the catheter.

Suspecting the passage of concretions, in these cases, Dr. P. did not order venesection or emetics.

"The practice, indeed, which appeared to me most advantageous, was the steady use of a mixture of the *infusum gentianæ compositum* and *infusum sennæ*, with the addition of from ℥. x to ℥. x of *liquor potassæ*, repeated so as to produce four or more stools in the twenty-four hours. Under its use the flakes first separated, and continued to do so, in great abundance; the jaundice disappeared, and the patients recovered health and strength." P. 114.

Saline purgatives had been tried at first, but under their use the canal did not appear so completely to discharge its contents as when the medicine above-mentioned was exhibited.

Dr. Powell observes that the formation of adventitious membranes in the intestinal canal has not been so frequently noticed as it has in circumscribed cavities. "The appearance which comes nearest to it, both in resemblance and situation, is the membrane formed in the trachea under croup," but the symptoms are there more violent and destructive from locality of situation. The most remarkable circumstance, our author thinks, is "the production of an effect usually ascribed to inflammatory action without its previous existence." Coagulable lymph is known to be thrown out upon the mucous membrane of the intestines in inflammation, but in the cases in question, Dr. Powell thinks there was no evidence of an inflammatory process going on, as the pain was rather of a spasmodic nature, and the skin and pulse remained natural. Our author missed the opportunity of chymically examining the flakes thus evacuated; but a quantity of them put into spirit of wine "was contracted by its action, so as to look almost fibrous rather than membranous, as at first, by which one would be led to suppose that they may consist of albumen, though this is only a supposition." 116.

We have not interrupted the thread of the analysis, in order that we might introduce a few observations of our own at the end. We have seen several cases of the kind described by Dr. Powell, and we have experienced them personally, so that our attention has been a good deal directed to the pathology and treatment of the complaint.

Every one who has seen much of dysentery, whether in hot or cold climates, must have observed those portions of adventitious membrane (if the term be allowed) frequently come away, especially towards the close of the disease in bad or fatal cases.* The symptoms during life, and the examinations after death, have pretty clearly proved these produc-

* See Morgagni. 31st Epistle, for example.



tions to be the result of great irritation and inflammation in the mucous membrane of the intestines: we know too that irritating substances swallowed have caused tubular exudations to be formed and thrown off by stool, precisely similar to those we are speaking of. Tartra, for instance, relates the case of a woman who had swallowed a quantity of nitric acid, and who, on the twentieth day afterward, passed, *per anum*, a long membranous packet, in one entire piece, rolled up and folded on itself, which, on being disentangled, exhibited a complete mould of the œsophagus and stomach, with all their sinuosities. From the moment that this was thrown off, the internal surface of the œsophagus and stomach became so sensible and irritable that death ensued in a few days.*

“The false membranes,” says Villermé, “of the mucous membrane of the alimentary canal, are perfectly similar to those formed in croup. The fragments passed by vomiting or by stool, are generally soft, pulpy, and without any appearance of organization. *The re-agents which concrete albumen render them hard.* Sometimes these flakes are considerable, and when developed in water, represent entire tubes broken off irregularly at the ends, which have led to the erroneous opinion that they were portions of the mucous membrane of the intestines. I have had occasion to see great quantities of these adventitious membranes passed by stool, in the colic of Madrid. They were generally of a gelatinous consistence, and enveloped in mucus. One of these exhibited an exact mould of the intestine, being tubular, and some inches in length.” *Dict. de Sciences Med.* vol. 32, p. 261.

In such cases there can be little doubt of the formation of these false membranes being the legitimate product of irritation and inflammation, in the same way as they are formed on the serous surfaces, as we showed in our article on peritonitis. But we meet with the said membranous substances under very opposite circumstances; viz. in sedentary persons, especially females, who have languid and imperfect digestion, with a torpid state of the biliary and intestinal secretions. Here gelatinous concretions would appear to take place on the internal surface of the intestines, and even the hepatic ducts themselves, from mere remora of the fluids and want of energy in the secretory glands and organs. To this obstruction of the biliary ducts, we have traced many instances of jaundice, accompanied by all the symptoms attending the passage of a biliary calculus, as described by Dr. Powell. At the decline of the disease, we have not only seen the

A. B. Tartra, de l'empoisonnement par l'acide nitrique, p. 160.

membranous fragments mentioned by Dr. Powell, but we have seen substances resembling worms or vermicelli, of different sizes and lengths, and which were evidently of the same nature as those broader fragments that had lined the intestines. We conceive they had lined the hepatic ducts. The cases detailed by Dr. Powell all evinced obstruction to the flow of bile into the intestines, and regurgitation of the same into the current of the circulation, accompanied, of course, by icterous suffusion and white stools.

To those, however, who may feel difficulty in conceiving that these albuminous incrustations can be owing to mere inactivity of the secretions, we would suggest another view of the subject. Where we find defective and irregular secretions of the chylipoetic viscera, we almost invariably find the secreted fluids depraved in quality—being sometimes extremely acrid, fetid, and irritating; at others scanty and insipid. Now, whoever has been so unfortunate as to be afflicted in this way, can vouch for the train of painful and uneasy sensations which occupy the line of the alimentary canal, while these depraved secretions are passing, and will very readily believe that such sources of irritation may be quite adequate to the production of those gelatinous exudations, which, in other cases, have been clearly traced to irritation and inflammation. That the irritation of depraved bile itself has often caused spasmodic constrictions of the biliary ducts, and thereby produce jaundice, is believed by many; and it is stated in a recent publication on affections of the liver, that—

“The symptoms attending these spasmodic constrictions of the biliary ducts are sometimes as violent as those where calculi are impacted. Indeed it appears to be the spasm, in both cases, that causes the intense pain.”*

The same author observes that—

“The passions have a most remarkable effect on the secretion, and also on the ducts of the liver. A fit of anger will so derange the state of the bile, as to tinge the skin yellow in a few hours. *A sudden and unnatural acrimony of a secretion may very readily excite the organic contractility of a tissue composing a canal, and thus occasion a stricture of its calibre for the time being.* In this way I have no doubt that jaundice is often induced by mental emotions, as anger, jealousy, grief, &c.†

In addition to the judicious therapeutical measures detailed by Dr. Powell, in the complaint under consideration, we may

* On Derangements of the Liver, p. 77.

† Ibid. p. 76.

be permitted to state that in the paroxysms we have found the warm bath—warm fomentations—leeches—and blisters, serviceable as external remedies; and that internally, we have been in the habit of allaying the pain and irritation first, by pretty large doses of opium and hyoscyamus, and then acting on the bowels pretty briskly by compound extract of colocynth, calomel, and hyoscyamus, aided by purgative enemata to solicit the peristaltic action.

It is of more importance, however, to prevent the recurrence of these distressing attacks; and we are convinced that this can only be effected by not only regulating the state of the bowels, but by correcting the depraved secretions themselves. This is to be done by strict regimen, great attention to the functions of the skin, and by such remedies as act on the biliary secretion. We have recently removed the tendency to this complaint in a lady, who, for several years, seldom passed two months without an attack similar to what Dr. Powell describes, by alterative aperients, generally aloes, soap, blue pill, and ipecacuan, together with a steady perseverance in the use of the nitro-muriatic acid bath. She now rarely takes any medicine internally; but has recourse to the bath, when the secretions become dark or light coloured, by which means they soon become improved. She has experienced no attack for seven or eight months past.

We think the profession are much indebted to Dr. Powell for having drawn their attention to a painful complaint whose etiology was badly understood, or absolutely mistaken in many cases, and whose treatment was consequently defective.

VIII.

Narrative of Facts relative to the repeated Appearance, Propagation, and Extinction of Plague among the British Troops in Egypt, in the Years 1801-2-3. By JOHN WEBB, Director General of the Ordinance Medical Department.

ALTHOUGH it is highly improbable that, under existing circumstances, and in the present improved state of society, the plague shall ever revisit, or, at all events, spread on the British soil, yet the solid proofs of its peculiar and contagious nature, (drawn from ample experience, not insane reveries of the closet,) are deserving of record, in order, at any future time, to silence the idle dreams or visionary speculations of those who may endeavour to force themselves into

notice, not by the exertion of well-applied talent, but a pugnacious attack upon some well-founded principle.

The great body of this paper is taken up with official documentary evidence of the facts mentioned in the title of the article, and which we must pass over, as not necessary to be noticed in this place. They clearly establish the contagious character of the disease, and exhibit practical examples of the means of bounding its ravages, when it unfortunately finds its way into a fleet or an army.

"So far," says Mr. Webb, "as my own experience, aided by inquiries, enables me to form an opinion on this intricate subject, I am inclined to consider the plague as much an inhabitant of Egypt, as the small-pox is of England." And again—"various other particulars occur to my mind, in confirmation of what I have advanced, but presuming those I have already adduced are amply sufficient to prove the contagious nature of the plague, I shall only beg to say, in conclusion, that if I were again so circumstanced as to have the care of preserving an army, or a community from the calamities it occasions, confided to me, I should consider no plan of precaution of any avail, if not founded on a full admission that pestilential contagion is one of the most subtle poisons that exists, as well as the most destructive to human life; and that there is no safety for strangers in the countries subjected to its ravages, whether the disease be prevalent or not, but in adopting and uniformly observing the strictest precautions to avoid the sphere of its action." 168.

It is needless to say that in these sentiments we entirely agree, with an exception to the first sentence. For as we do not consider the small-pox an inhabitant of England, particularly, neither do we believe that the plague is bounded by the limits of Egypt. This would be making them local or endemic diseases, whereas we know them to be specific contagions, very capable of being transported from place to place, and even from country to country.

Our analysis of the volume under review will be continued in the next number of this journal.

IV.

SPASMODIC CHOLERA OF INDIA.

1. *Report on the Epidemic Cholera Morbus, as it visited the Territories subject to the Presidency of Bengal, in the Years 1817, 1818, and 1819. Drawn up by order of the Government, under the Superintendence of the Medical Board. By JAMES JAMESON, Assistant Surgeon and Secretary to the Board. One vol. 8vo., pp. 325. Calcutta, 1820.*

2. *Account of the Spasmodic Cholera which has lately prevailed in India and other adjacent Countries and Islands, &c. in a Letter from Mr. Corbyn to Sir Gilbert Blane. Medico-Chirurgical Transactions. Vol. XI. part 1, 1820.*

"Noxia ei penitus CHOLERAM seivire venena." SEN.

WE have given so full an account of this tremendous epidemic in our Review of the excellent report drawn up by the Bombay Medical Board, that we dare not trespass on the patience of our European readers by entering into an analysis of the present documents. Mr. Jameson appears to us to have drawn up a very impartial digest of the various returns made by full 100 medical officers. It could hardly be expected that no discrepancy of opinion should prevail respecting the cause and treatment of such a wide-spreading epidemic. There was, in fact, considerable clash of sentiment, but as far as therapeutics were concerned, a very large and preponderating majority of evidence furnished ample grounds for the following conclusions, which we shall give in the words of the author.

1. "The disease sometimes attacked with such extreme violence, as, from the commencement, apparently to place the sufferer beyond the reach of medical aid, and to render every curative means employed equally unavailing.
2. "The difference in the degree of mortality among those who did, and those who did not, take medicine, was such as to leave no doubt that when administered in time, and with discrimination, it frequently saved the patient from death.
3. "The chances of a patient's receiving benefit from medicine, diminished in proportion with the increased duration of the attack.
4. "In Europeans generally, and in robust natives, bleeding could be commonly practised, where the patient was seen within one, two, or perhaps three hours, from the beginning of the attack :

and in all cases, in which it is resorted to, under such favourable circumstances, it was more successful than any other remedy in cutting short the disease: usually resolving spasm; allaying the irritability of the stomach and bowels; and removing the universal depression under which the system laboured.

5. "Among the generality of natives, the depressing influence of the disease was so powerful and rapid in its operation, as almost immediately to produce a complete collapse, and nearly destroy arterial action; and therefore to render venesection for the most part, from the beginning, impracticable.

6. "Although it cannot be affirmed that calomel possessed any specific power in checking the disorder, it was undoubtedly frequently useful in soothing irritability; and was, perhaps, of more certain sedative operation than any other medicine." 247.

Whether it was that the epidemic, in a few places, totally changed its nature, or that the mental telescopes of a few individuals had one lens more, or one lens less than those of the generality of mankind, (of which we see occasional examples in this country) but so it was, that the above-mentioned remedial measures found useful by nine-tenths of the community, not only failed, but proved *highly prejudicial* in the hands of some.

In a supplement to the work it appears that subsequent to the month of June, 1819, the disease reappeared in the upper provinces, and it would seem with some modification, as bile was frequently seen in the stools; and reaction was more violent. It is not difficult to conceive that, under such circumstances, "large and repeated bleedings proved the only efficacious means of opposing the disorder."

Of the *remote* causes of this epidemic, Mr. Jameson, and consequently the Calcutta Board, can offer nothing satisfactory. They conceive that it could not be owing solely to atmospherical vicissitudes—though they were great—nor to contagion—nor to any thing connected with food. They conjecture that a morbid poison or miasm, however produced, was carried along by the easterly winds, and gave origin to the epidemic. This is all the explanation we can expect in the present state of our knowledge, and on which we shall make a few remarks further on.

Mr. Jameson, in labouring to subvert the hypotheses of others, respecting the proximate cause, or rather the immediate seat of the disease, has fallen, as usual, into an hypothesis himself. He endeavours to show that the impression of the morbid cause is not exclusively made on the skin, nor on the liver; but as far as we can gather from him, it is on the *stomach*. Now this we think is only substituting one *exclusive* doctrine for another. We believe that all the

great organs of the body are so intimately linked together, not only by blood-vessels and nerves, but by sympathetic association of function, that no one can bear the onus of disease without drawing in the others to a participation. Moreover, we cannot but conclude that a cause, so generally diffused in the atmosphere as that of an epidemic must always be, will affect a number of organs and parts simultaneously—particularly the whole of the nervous or sentient system distributed over the surface of the body, the mucous membrane of the lungs, and the lining membrane of the digestive organs.

It is hypothetical then to limit the primary morbid impression to a single organ or tissue, however that part may appear to suffer in the course of the disease. That the nervous system in this, as indeed in almost all other epidemics, suffered the first shock, we can prove from Mr. Jameson's own symptomatology of the disease.

"The irritability of stomach, and vomiting, formed a very distressing part of the disorder. They were generally preceded by a feeling of giddiness, and inclination to faint." And in another place, "In some rare instances, the virulence of the disease was so powerful as to prove immediately destructive of life; as if the circulation were at once arrested, and the vital powers wholly overwhelmed. In these cases the patient fell down as if struck by lightning, and instantly expired." 42.

Still less will the *post mortem* researches bear out our author.

"In many, especially those who died early, the stomach and intestinal canal were found full of muddy fluid, without the slightest mark of inflammation. In others, the vessels of their inner coats were turgid, sometimes highly inflamed, ulcerated, and gangrened. The liver was congested, inflamed, and darker than usual, &c." 72.

The Bengal Board corroborate the statement of the Bombay Board respecting the nonappearance of bile in the stools or in the bowels after death. "Neither in Europeans nor in natives, was any tinge of that secretion discovered in the intestinal canal."

Mr. Jameson preserves a studied silence respecting the first person who pointed out this peculiar feature of the Indian cholera, and who first practised and suggested *venesection*, the measure on which all their hopes depend.* The Bombay Board have acted differently, and have honourably adhered to the honest maxim, "*sum cuique*."

* "I have not mentioned venesection, though from its instantaneous good effects in three desperate cases (of cholera morbus or mort de chien) I am

Nevertheless, leaving this and theory out of the question, the work before us has impressed us with sentiments of high respect for the talents, good sense, and general impartiality of its author.

Mr. Corbyn's communication to Sir Gilbert Blane is now more than a thrice told tale—having been published substantially in the *Edinburgh Medical Journal*, in the *Bombay reports*, and in our own journal for April last. A further experience of better than a year (being brought up to September, 1819, nearly as far as the *Calcutta reports* before us) has confirmed Mr. Corbyn's former statements relative to the treatment of this formidable epidemic.

"The outline of the treatment alluded to, is, to administer twenty grains of calomel (in powder, not in pills) and to wash it down with sixty drops of laudanum and twenty drops of oil of peppermint in two ounces of water—to bleed freely in the early stage—and to support the warmth by external heat, the hot bath and hot friction, and internally by cordials." 122.

Sir Gilbert Blane, in a commentary on the different communications, has laboured to render it at least probable that this epidemic was *contagious*. It is sufficient to say that the *Calcutta Medical Board*, who had better opportunities of ascertaining this point than Sir Gilbert Blane, give a decided negative to the supposition.

Sir Gilbert Blane has been favoured by the *Army Medical Board*, with a document from the principal medical officer in the *Isle of France*, showing that the epidemic appeared there on the 20th November, 1818. It has since raged with great violence.

Here, as in *India*, the laborious classes of the population suffered most. "With regard to the practice, opium and calomel were administered to the cases in the army, but in smaller doses than in *India*." The principal medical officer denies contagion, attributing the epidemic to atmospheric influence. The inhabitants, however, believed the infection was imported by the *Topaz frigate*! Such popular beliefs, like some popular disbeliefs here, are little worthy of notice.

"Non ego ventosæ plebis suffragia venor."

inclined to think that it might prove a powerful auxiliary in relieving the brain and other internal organs, when overwhelmed with blood, anterior to reaction; and also by moderating the reaction itself." *Johnson on Tropical Climates*, p. 412; first edition, 1813. How far the above-mentioned anticipations have been realized, we leave Mr. Jameson to judge.

The inhabitants of Bourbon, acting on the contagious creed, instituted a strict quarantine. But the epidemic laughed to scorn these little hypothetical barriers, and marched into the place without ceremony.

One of the medical officers having stated his opinion that the cause of this epidemic was owing to the issue of a morbid effluvium from the earth, as was long ago maintained by Sydenham, Sir Gilbert Blane characterizes this opinion as "an assumption purely gratuitous, and neither supported by fact nor countenanced by analogy." Now we would ask Sir Gilbert Blane if the matter of contagion, or the febrific miasm from marshy soils, has ever been rendered cognizable to the senses?—and what proof have we of their existence but by their effects? The epidemic in question, as well as many other epidemics, could not be traced to contagion, for even, according to Sir Gilbert's own confession—"it has been found occasionally, like the small-pox, to break out in spots a few (he might have said a few hundred) miles distance from the known seat of contagion, *without its being possible to trace it.*" The idea of contagion then being almost universally given up, we have but two other probable sources—the earth and the air. The longer we have reflected on this subject, the more we are convinced of the truth of Sydenham's conjecture. We know that certain states of the earth's *surface* will disengage morbid agents. But it will be triumphantly asked, "have these agents or effluvia been ever seen issuing from the *bowels* of the earth?" We answer, by asking if they have ever been seen descending from the regions of the air, or passing from one person to another? And are there no subterraneous agents at work? Do we never feel the earth itself tremble under our feet from one extremity of Europe to the other, from the agency of subterraneous and unseen causes? Have we not seen pestilences quickly succeed these intestinal commotions of nature? Do we not actually see the electric fluid itself, at one moment forsake the air, and plunge into the bowels of the earth; while the next instant, it springs from thence to the clouds over our heads? And is morbid effluvium a *less* subtle fluid than the electric? Oh! but, says Sir Gilbert Blane, "how is it conceivable that these effluvia could exhale from the earth in the progressive manner in which this disease extended itself, and how will it account for its appearing *on board of ships at sea?*" In answer to this we must first state, that the great Eastern epidemic spread from one extremity of India to the other, often *directly against the monsoon*. Now, how is this reconcilable with atmospheric influence? It would be very curious, too, if human contagion had the power of selecting a single point

out of the thirty-two in the compass, and of refusing to travel for a time on any other parallel! It would be equally curious if atmospheric influence could propagate itself directly against a trade wind, which blew in one direction for six months together!

Indeed, the capricious as well as obstinate courses which this epidemic occasionally pursued are much more explicable on the principle of a terrestrial, than of an atmospheric or contagious influence. We see the causes which produce earthquakes take the most irregular and unaccountable routes; and as for this morbid agent appearing at sea, we can have no great difficulty in conceiving the possibility of such an occurrence, after seeing, in our own days, volcanic islands boiling up from the bottom of the ocean.

Upon the whole, we think that we have been much too precipitate in rejecting the opinion of Sydenham, and that no other hypothesis, if such it be, is half so plausible as the terrestrial origin of epidemic influence, however that influence may be subsequently transported about, or modified by atmospheric constitutions.

And here we cannot help stating it as our decided conviction, that the ever-varying *causes* of epidemic diseases will produce an ever-varying character of them, and consequently an ever-varying pathology and treatment. This may be mortifying to the pride of man, who often builds an ingenious theory on the symptoms and treatment of a single epidemic, the whole foundation of which is shaken to the centre by the next visitation of disease. It is in vain to say that epidemics differ only in the organs principally affected. What produces this difference of seat? Here we must recur to an *occult* cause, however we may be inclined to account for things without it. The fact is, what all unbiassed observers have long ago acknowledged, that not only do the causes and seats of epidemic diseases materially differ at different epochs, but their whole nature is modified, and requires an ever-varying modification of management. Nor do we think that this impassable bar to perfection is at all injurious to medical science. If pathology and therapeutics could be reduced to certain fixed and invariable rules, inquiry would languish, and the human mind would soon lose its most powerful stimulus to exertion. Medicine might then be administered by the mere routinist with as much success as by the most intelligent physician. But there is no fear of this consummation in the practice of physic! Our descendants will have to go all over the same ground that we are treading, and probably not a single tenet of the present time will hold good fifty or even thirty years hence. But if we roll the stone of

Sisyphus, it is not in vain. The exertion, though it may be useless to futurity, is salutary, nay, absolutely necessary for us. If our utmost efforts are incapable of placing us one step in advance, still a moment's cessation from labour would inevitably cause us to retrograde. But to return.

The Army Medical Board have recently received intelligence from Ceylon, and with their accustomed liberality have communicated the same to the profession.

Dr. Davy, who is already known to our readers, considers that the epidemic was unconnected with the direction of the winds, the topography of the places visited, or any sensible changes in the state of the atmosphere. In some cases, the flaccidity of the muscular parts after death, resembled that produced in animals by electricity, or when hunted to death. The colour of the venous and arterial blood was the same—both being of the dark venous hue. The blood drawn never presented a buffy coat. An analysis of the air expired from the lungs of the sick, did not contain more than one-third of the carbonic acid contained in the breath of healthy people. Mr. Finlayson observed in some cases, what happened often in Bengal, that the operation of the morbid cause was so violent as to destroy life in a few hours, without any of the characteristic tokens of the disease, except the extreme prostration of strength. The warm bath and all other medicines seemed rather hurtful than beneficial.

“Non vota, non ars ulla correptos levant!”

In these particular cases there was such great congestion of blood in the brain “that it had the appearance of being enveloped in a layer of dark coagulated blood, or by a diffuse and general ecchymosis, and in some cases, when it was cut into, large quantities of dark coagulated blood gushed from it and from the theca of the spine.” In the ordinary form of the disease, this appearance was wanting, the blood being principally collected in the abdominal viscera. “The blood was so fluid that any opening of the larger vessels produced an inconvenient effusion. In several cases, the surface of the heart and pericardium was lined with a green-coloured gelatinous fluid.” There was found a dark-coloured fluid in the stomach, and a colourless fluid in the rest of the intestines, which were blanched like tripe. These appearances were peculiar to cases of early death. In the more advanced stages, the morbid appearances did not differ materially from what has already been described in our eighth number. The deaths, in several of the stations, equalled the recoveries, or even exceeded that proportion. In two cases, the spasmodic contractions continued for some time after death! “The stress

of the cure was laid on twenty or thirty grains of calomel given at first, and repeated in doses of eight or ten grains every second, third, or fourth hour. Blood-letting was practised with the same relief as in other parts of India." We fully coincide with Sir Gilbert Blane in the following passage.

"We cannot conclude this article without remarking, that the medical officers of the British empire in India have done themselves much honour, by the great ability, zeal, and humanity displayed in the preceding communications."

Our brethren in the Eastern hemisphere have had most arduous duties to fulfil during the last three years, and we have reason to believe that the manner in which they performed them has reflected credit on the profession, and on humanity.

"Vir bonus, quod honestè se facturum putaverit, faciet, etiamsi laboriosum erit :—faciet, etiamsi damnosum erit :—faciet, etiamsi periculosum erit."

V.

General Indications which relate to the Laws of the Organic Life. By DANIEL PRING, Member of the Royal College of Surgeons, London. One Vol. Octavo, pp. 352, London, 1819.

—"————— presume not God to scan."—*Essay on Man.*

ONE prominent and leading principle of the work before us is to demonstrate the non-existence of a "Great First Cause"—of a God that created us—of a Providence that rules over us.

"Hence it follows that the principle of intelligence, this same designing principle, must be made by causes, or *is their effect*; and as the causes individually must be different from the effect, so there were agents which preceded design, and without the guidance of design, formed the designing principle itself: and yet it is said that nothing good, excellent, or regular, can be produced without design; while it must be admitted, agreeably with natural evidence, that design itself must have been produced without it.

"According then to the preceding principles, which are merely exhibited as a sketch of the indications of nature, the following is the state of the question with respect to the influence of a pervading intellect, or universal mind:

1. "This visible world cannot have been produced *de novo*. not



having existed in any form before, by mere intellectual influence ; since no cause can supply that which it does not possess, or be either more or less than itself, or contribute any other influence than that which is comprised in its own existence.

2. "Such universal mind itself must have been produced by its causes ; and these latter, determining all effects, determining all operations (since nothing can take place but by them,) must govern such universal mind, making it that *which it is*, and making it in its turn concur in the general scheme of causation." 43.

Thus what we, poor ignorant mortals, have hitherto considered as an Omnipotent, Omniscient, and Omnipresent Deity, who constructed the universe—and still preserves it,

"Principium, Rector, Dux, Semita, Terminus idem,

"Qui regit immensam justo moderamine molem,"

turns out to be only a blind sub-agent, formed himself by anterior, and consequently more powerful causes, which govern and determine all his operations,—making him "in his turn concur in the general scheme of causation!"

We never had a doubt that atheism would be the end of materialism. When men presume to determine on what are, or what are not, *final causes*, (a subject completely beyond the reach of human comprehension) the natural consequence is what the foregoing extract has unequivocally portrayed. Now, as we consider that the great laws and ties, by which society are held together in peace and comparative happiness depend mainly for support, on a belief, not only in the existence of a Deity, but in his superintending providence over the universe,

"Qui pelagus fluitare jubet, consistere montes,

"Qui corpus mentemque dedit —————"

so we think that the man who endeavours to destroy this belief, commits a greater crime against the public good, however innocent his intentions, than he who goes about to sap the foundation of human laws, and political institutions.

If it be said—and it is here said—that these philosophical doctrines are only designed for philosophers, and will not be read, or if read, they will not be understood, by the vulgar : we reply that in the present state of knowledge and its facility of diffusion through all classes of society, the tenet of the philosopher, when it suits the purpose, is quickly converted by the licentious, the seditious, and the unprincipled leveller, into a powerful engine of corruption for the discontented and ignorant orders of the community. When therefore the surgeon, with his scalpel in his hand, boldly proclaims the nonexistence of a soul, and the metaphysical physician, by an elaborate process of reasoning, demonstrates

the nonexistence of a Deity, can we wonder that the active radical philosophers of the day should avail themselves of these advantages, by familiarizing the above-mentioned doctrines for popular comprehension, and disseminating the most fatal poison through the veins of the body politic? That this is positively the case, every man of common observation may be convinced by the slightest glance at the state of things around him. And granting, for a moment, that this were not the case, to the extent described, are we authorized to lay before the junior branches of medical society a system of atheism and fatalism, which unequivocally annihilates every restraint upon the passions and conduct of man? If the philosopher's deity himself be but a blind agent in the "general scheme of causation," obeying implicitly and unconsciously the operation of causes "which make him what he is," can MAN be then a moral or responsible agent, more independent than his God? No! the actions of his life are the necessary *effects* of causes over which he has no control. To take a neighbour's life, or seduce a neighbour's daughter, therefore, can no more be a crime, than to feed the hungry or clothe the naked can be a virtue! Let fathers, husbands, and brothers, peruse with attention the following extract.

"It has been asked, first, if there were no such universal *mind*, how came we to have the notion of such a thing? It has been further inquired, secondly, how the notion of an intellectual and moral presence came to be so prevailing, that there is perhaps no people who have not the idea of some powerful and intelligent being who governs the world? For the first question, it is sufficient to remark, that there are such things as fictions, and in the same manner as they arise might originate any notion, and consequently the one we are considering; the notion is formed by the combination of ideas from sensible impressions, and by the assumption of analogies. Thus much is sufficient to show that the *origin* of a notion is no proof of its truth, for by the same processes we are originating notions, some false and some true every day. And for the second question, it is only to be observed, that if a fiction is one to which human nature, from similarity of constitution, is prone, it will be very likely to be an universal one, without being the less a fiction. Thus in the more ignorant times, and now among ignorant nations, spiritual agencies were perpetually occurring in nature, and affecting the concerns of men: the influence of the planets over certain affairs has likewise been a prevailing fiction, which however is discredited by men of sense and reflection, because they find no evidence for the opinion; and without this support it is not consistent with their character to fill their understandings with bad conceits, when the value they set upon good ones is shown by the pains they take to find them. Thus much for the questions: I proceed to show that the belief of some

universal governor is one which men must be prone to slide into by an easy gradation from the common observance of causes.

"The notion of such an existence might arise out of the almost intuitive assent to a principle which has hitherto appeared to be the basis of a different argument: the principle is this, that nothing can exist without a cause; and now for the application. It is observed, that things do not make themselves: this observation disposes us to look for their causes. As one instance, we will take a human bone (or any other bone,) but, for the sake of precision, a human tibia: what produces it, what constitutes it? It will be replied, a bone is made by the union of phosphate of lime, phosphate of magnesia, carbonate of lime, sulphate of lime, gelatine, fat, and cartilage; blood-vessels, &c. exist in bone, and our tibia has a certain arrangement. Now urge the question further, which is very natural, and ask what determines this arrangement? We are not acquainted with the agents, and therefore supposing the necessity of a cause, as observed above, we say, God. Again the phosphate of lime, if first detected in bones, would be considered a simple substance: if it should, during this opinion, be asked how this phosphate of lime came to be? still retaining the necessity of some cause, it would be replied, it was created by God. But another step of analysis would give rise to a different reply; for when the two materials of which this substance consisted were known, the question, how it came to be, would be answered, "by the union of lime and phosphoric acid." Every example tends to show that a Divine agency is assigned to begin where analysis, or the knowledge of causes, ends. Thus it happens that the assigned extent of the influence of the Deity is absolutely abridged as science advances; for as known causes are developed, the unknown cease to be supposed. In this way then the idea of some general antecedent cause comes to be obtained, and it is founded upon the acknowledged necessity of such a cause, *which necessity must obtain equally* (or the necessity is limited without reason, and in a case in which the universal analogy holds good) *with respect equally to the existence of the Deity as of other things*; this is a point which has been discussed.

"The notion of a first cause being in this way acquired, men very soon and very naturally extend their imaginations, and they next conclude him to be a *moral agent*. This conception is as easy as the other, and equally fitted to become prevalent, without natural evidence of the stricter sort. Thus, all those things by which we are liable to be affected, are related with us in such a way as to produce either agreeable or disagreeable sensations: the causes of the former we call good, those of the latter, evil. Now who dispenses these? Why, no other than the first cause which made them to exist. Then we come to invoke this cause to bestow upon us what is good, and remove that which is evil, and it is *very seldom that we are gratified*, except as an ardent desire for the possession of an object induces us to make strenuous efforts to obtain it. *Deities are in this way formed by the personification of causes*, and, as in the Mythology, particular God may be assigned to each department of causes." 45.

Before making any remarks on the blasphemous impiety of the foregoing conclusions, we shall set before our readers a specimen of the reasoning whence they are drawn.

“What is a *cause*? The term implies a relation: it is that which is capable of producing something different from itself, which something is called an *effect*. This also is a relative term, it implies that which results from the operation of a cause.

“What virtue is there in a cause which enables it to produce something different from itself? a question well urged: why truly, none. If a cause could produce an effect which is different from itself, that in which the difference consists, if it be superadded to the cause, must originate from nonentity: which is contrary to our established principle. If it be only a part of a cause, some properties having been abstracted, why then there is no act of production; for that only remains, and is the effect, which was before produced. A single cause is no agent, it is an identity, but capable of no transaction: for a thing cannot supply or confer what it does not possess; all it can supply is itself, or its own identity. How then do effects comprise the cause, and still be something different from the cause?

“As a single cause can produce nothing different from itself, and as the effect, according to the relative signification of the word, is more than the cause; and as this difference cannot originate out of nonentity; so the difference must on these accounts be supplied by something else. The effect then depends, not upon one, but upon more than one cause; and as all things are effects, there can be nothing simple and elementary, but all things must be produced by *causes*.

“The causes which make an effect can supply nothing but themselves, nothing but that which pre-existed; the effect therefore is no new existence, but it is a new form; called *new*, from its having taken place at some known period. Surely, it will be said, an effect appears to be very different from its causes? It must be different from its individual causes, but *is* that which it is made by them all; *the causes must be different individually from their effect, or the whole*: and this, in some respects, is a gigantic principle.

“The mode by which a cause acts has nothing mystical in it, *it is itself, and no more than itself, and it can do no more than exist*. But it may exist separately, that is, as an effect dependent only upon its own causes. When it performs that which characterizes a cause, viz. when it produces an effect, it is by combining with something else.

“In this combination there is no new production; both causes (or if they were a thousand it would be the same thing) are changed. so as to exist, still preserving every property which belongs to them, in another form. This other form is the effect which is thus conjointly produced.

“Causes do not lose their existence in changing their form: although in the effect the causes separately may not be recognized.



they cannot lose their existence ; the *whole* is a different combination, and of course possesses a double set of properties, which will individually have some share in determining its character. Every thing is liable to be considered as an effect : and all those things are liable to be considered as causes, which, from a relation between themselves and others, might change their form and produce effects." 21.

Such is the ratiocination of a medical philosopher, whose Pythian ravings have been represented by some of our cotemporaries, as the sublimest truths that ever issued from the human mind—the emanations of a genius incomparably superior to that of a Homer, a Milton, a Locke, or a Shakespeare ! Now to our humble comprehension these sublime effusions appear to be the dullest mass of unintelligible jargon—the wildest chaos of addle-headed lucubrations ever engendered in the brain of man or woman, excepting on the tripod at Delphi, or in the cells of a mad-house.

We have lately heard an intelligent physician remark, that the obscurity or rather unintelligibility of the reasonings would effectually prevent the work from being read, and consequently obviate its dangerous tendency. We cannot altogether agree in this remark. Many who cannot understand the *arguments*, may be staggered by the boldness of the *conclusions* ; and we all know that obscurity itself too often passes in this world for depth of understanding and thought. On this account we deem it our duty to point out the absurdity of the reasonings and the danger of the deductions ; although we are well aware that the Atheistic Phalanx will shower on us the titles of hypocrites, fanatics, enthusiasts, &c. for these liberal philosophers will not allow that a particle of honesty, candour, or independence of sentiment, can possibly exist beyond the limits of their own sect ! Let us, however, examine how far *they* observe the strict line of candid and ingenuous conduct. The long extract which we laid before our readers a few pages back has given them some notion of what Mr. Pring means by the term Deity—namely, an item "in the general scheme of causation," "produced by it *causes*, and *these latter* determining all effects, and governing such universal mind, making it what it is." Now we need not tell our readers that we look upon the Deity as a very different being—namely, as an omnipotent, wise, and designing Providence that made the universe and still governs it. What will be thought of the consistency and candour then of a man, who, after ranking the Almighty with a Chinese joss, a mythological fiction, a blind sub-agent, or link-god, in the general chain of causation, dexterously shields himself, at the conclusion, from the charge of Atheism, by the following declaration of his creed.

"I profess myself (as the nature of my profession may not by some be understood) with *all sincerity* to be a firm believer in the existence of a Deity ; and I ascribe to this Deity, even on physical testimony, *perhaps* all that revelation strictly requires."* 58.

Thus Mr. Pring either disbelieves all that he had formerly laboured to establish, or in the words "*a Deity*," and "*perhaps*" he has left himself a mental reservation by which he hopes to seem one thing and be another. That we have neither misunderstood nor misrepresented him we can prove by an appeal to the testimony of his professed admirer Dr. Hutchinson, who, in his last proemium, distinctly states, that Mr. Pring's system is "unfavourable to theology." How Mr. Pring and his advocates will explain this contradiction or equivocate we know not ; and how often they may choose to thunder forth their epithets of hypocrisy and dissimulation against us, we care not.

But we have yet another charge to prefer against Mr. Pring, in which he first outrages our feelings, and then insults our understanding. After his laborious attempt to establish Atheism, and consequently subvert Christianity, he coolly tells us that all these PHYSICAL proofs of Atheism have nothing to do with religion, since, "*Christianity sets Nature aside, and entirely out of the question* : it is proposed by its author that it should be accepted in the way of *confidence*, or trust upon his authority ; and whether *natural testimony concur with or oppose the system*, is a point which does not at all affect the grounds or terms upon which it is *recommended*." 57. Thus our author contemptuously leaves it to credulous Christians to believe—"quia impossibile!" Mr. Pring knows less of the material world in which he resides, than of the metaphysical world into which his imagination has wandered, if he thinks such insults to common sense, as the above passages convey, can raise him in the estimation of any man whose opinion is worth consulting.

And here we beg to call the attention of our brethren to the now prevalent system of amalgamating metaphysical and atheistical doctrines with medical and surgical subjects. The faculty has already suffered in some degree, by the indiscretion of a few of its members ; and we conceive that if we value our own respectability, or the esteem of society at large, we should check and discountenance these licentious aber-

* In the very page before this he gives a flat contradiction to this "physical testimony : " for he says:—"The true and *only* source of proof, by which the *existence and moral government of the Deity* can be consistently established, is revelation." 57.

rations of the prurient imagination, ere it be too late. We live in a period when the harsher features of the human mind are rapidly developing themselves—when the moral restraints over the passions are bursting asunder, one after another—when divine laws are contemned, and human laws resisted—when physical force is openly opposing itself to moral feeling—and when nothing but the fear of punishment can restrain the commission of crime. At such a period, shall those, whose duty and employment it is to alleviate the sufferings of humanity, be found aiding in the work of demoralization, by organizing fundamental principles for radical systems of revolution and ruin! We have selected, as our motto for this article, the memorable words of the poet—"presume not God to scan!" It is not beyond the range of possibility, nay, of probability, that a licentious indulgence in the fruit of that tree of knowledge, which once before—

"Brought death into the world, and all our wo,"

may yet again precipitate man from his Eden of civilization and science into the gulf of barbarism and ignorance! All extremes, like great and heavy bodies, are endued with potent principles of approximation. TYRANNY, under our own eyes, has risen, phoenix like, and clapped its gloomy wings over the ashes of LIBERTY consumed by her own *excessive* fires. Where is the bright and too often impious intellect of Greece? A crescent only of her former orb of light remains; the badge of her degradation and emblem of her mental night! Where is the thunder of the Roman senate? Changed to a mummerly over beads and crosses!—Even in this country, the PRESS, that pride of art, that palladium of freedom, that universal organ of thought, whose voice is heard wherever earth extends, may yet prove the engine of its own destruction! Good and evil are its products; and should the latter come to predominate, the event may be readily imagined.

In the mean time, we conceive it to be the duty of the medical profession, and particularly of medical writers, not only to stand aloof from the ranks of impiety, but to raise their voice in support of religion and virtue.

And here we cannot but lament that such a man as Mr. Pring, whose talent is great, though wrongly directed, because employed on subjects beyond the reach of human intellect, should waste his mental energies on dangerous, or at the best, *useless* metaphysics, when the practical part of his profession offers such a wide field for cultivation. If the multitude of *physical* subjects yet unexplored, can afford him no hope for the successful exercise of his talents, what prospect can he have in fields of airy speculation?

"Missis igitur hujusmodi commentis de rebus quas Natura forsitan visibus humanis negaverit, tanquam ad *inutilia et incomprehensibilia, vel absurda fortasse*, ducentibus, magis e re sua erit, si medici ad singulas res factas et veras de hoc argumento investigandas semet graviter accinxerint." Gregory.

Even Sydenham, than whom no man was ever fonder of a bit of abstruse theory, acknowledges the absurdity of prying into *first causes*. "Nimirum certissimis ubique legibus, ac artificio sibi soli intellecto, rerum omnium generationes natura parens exsequitur; quoque uspiam e causarum gremio in actum, ac quasi in lucem, educit, eorum essentias, quidditates, ac differentias constitutivas, altissimis tenebris obvelat." P. 110.

Mr. Pring asserts that the Deity himself can make nothing where nothing previously existed. Now according to this very rule our author's labours must be abortive; for as his, or any other human being's, knowledge of the nature of God amounts to *nothing*, so *nothing* can result from this investigation—save only a book.

We are not, at the same time, blinded by prejudice; for we can plainly perceive, and we freely acknowledge, that the work before us, even in its metaphysical portions, contains unequivocal indications of a powerful mind. There are some passages too, exceedingly eloquent, and one of the most beautiful we shall here insert. It is put into the mouth of an *enthusiast* :—

"Great Nature, by whatever name expressed, it is to thee I address myself! thee I contemplate! thou art my theme: but where begin to think, where begin to speak of thee! I view, at night, a large expanse of hill and dale, shaded with trees, clad in luxuriant verdure; or naked, sighing at the rude attacks of wintry blasts. Imagination paints the extent beyond, where earth is mottled by other shapes and clothing; with other animals to enjoy her fruits. From this terrestrial scene, the view ascends to those revolving orbs, this lofty dome, adorned with stars and planets. These things I contemplate, and wonder, Nature, at the vastness of thy space and works; thy silence breathes into my soul; all is immensity, engendering wonder. Yet this first impression once abated, a speck of thy production, with faculties, the offspring of thy bounty, presumes to scan thy methods, and pry impertinently into ways which thou hast studied to conceal. But forgive the trespass, it is love of thee that prompts this curious zeal, and guides my thoughts astray; it is thy work, that they should adore thee; take it, therefore, not amiss, that falling from the amazement which is first inspired by thee, I seek to know at least thy scheme, though ignorant of thy means, thy instruments, and subtler agencies.

"Thy movements give birth to time, yet thy existence acknowledges no period; thou hast made time, and wilt not be obedient



to thy creature : we boast some records of thy existence, and presume to fix a date to thy beginning ; but if *then* thou didst commence, from whence derived ? or how start forth from nothing ? Thy own nature, thy inherent and proper forces, had no share in thy origination, for that would be to date thy actions previous to thy birth. How then didst thou begin ? Methink, the spirit of the hills, at the question, shakes from him his beloved repose ; himself a part, speaks with a commissioned voice the language of the whole ; yet it is a voice sweet and soft, it floats like a zephyr, and is heard only in the stillness of the world ; it is a whisper to the soul, which swells when it comprehends the great idea, and echoes thus the truth, in accents of its own : “ Search not when that began which always has been : ages and ages have revolved, myriads of changes have been wrought, forms have been made, endured, and vanished ; destruction has succeeded quickly to creation ; yet Nature was, before all this ; her processes were repeated in periods infinite, which thou, with a capacity for finite purposes, understandest not, but must still think true.”

“ Is then great Nature indebted to no other power but her own ? Say what this other power is, and try if here our thoughts of *infinite duration* succeed more happily ; *something* had no beginning then ; the voice is surely no chimera : hark ! it speaks again.

“ What in this world, which so excites thy admiration, canst thou perceive but an assemblage of forms ? Thou wouldst know when and how they came to be. Oh ! dull perceiver ! little dost thou deserve to rise to universal truths, if thou so readily canst overlook what in thine own experience is without exception. Observe of things which *are*, but *were not* : thyself observe. The sun has not yet thirty annual courses run, since the creatures which are like thee knew thee not ; ask how thou camest to be, what has produced the thing thou art ? Thy history is clear : thy formation has, throughout been passive ; that which thou hast, by which thou dost exist, is given thee ; nought hast thou but what is conferred ; conferred by whom, or what ? A form thou hadst prepared for change, from others like thyself derived, but most imperfect. And what made this ? thy curiosity would ask. It is plain, an assemblage of existences, of occult forms or properties, whose being is inferred, because *existence* is their effect, but which to develope will yet for centuries to come make full employment for the restless spirits of thy kind. But this imperfect form derived, the earth feeds with constituents, animals, and plants : these transfused supply thy growth with its materials, and thy accessions are as they are furnished.”

“ Yes, this is the manner of it : existences all related ; and their relations fixed, not by themselves, but by the force of the existences which are included within themselves ; *existence still maintains existence, and nought begins where no existence is.*

“ What sum of admiration is sufficient for this grand world, enclosing in itself an endless series of forms and combinations ! Existence still springing from itself, and by itself perpetuated ; whose beginning no time has witnessed, whose end no period will define ;

existing without our knowledge how ; describing various shapes, pursuing various changes, none occurring but existence still compels ; all enduring in their present, or in other forms, *because existence has no power to be nothing.*

“ The stars are yet upheld ; great bulks we must acknowledge them, apparently above us : and they fall not though propped only by light ethereal columns. Who shall say why they keep their spheres ? who shall say what they are ; whether constant, or at periods produced by agents which we do not know, in worlds teeming with things and processes of which we here find no examples ? They govern not themselves, but are obedient to their own constituents ; there, too, existences are causes, and all we contemplate in them is yet compelled, *effected* by existence.

“ The sun is present, and imparts to us both light and heat ; it is formed by its own causes : these, or its grosser forms, by others, an endless chain. In turn it sends to us some causes, which it well can spare : to us it sheds existence, which mingles with our substances and creates new forms.

“ The sea possesses by a natural right, the deep dominions over which it rolls. This vast property it claims by force of causes which with it abide ; it seeks the lowest parts, and terrifies its confines all around by bold incursions on the soil which man calls his ; it foams and dashes against great rocks, a bulwark formed to check its aggrandizing spirit, and make its waters still recoil upon itself. Fruitless ambition ! thy powers have but their scope ; and further, earth is too mighty for thee, as it, in thy dominions, and all its fine productions, are but a weakness, serving for thy pastime.

“ Myriads of waves roar and froth, or, gliding smoothly, glitter in the sun upon thy melting bosom. Not one of these that moves, but moves as 'tis impelled ; it, passive, an effect ; in turn impelling, then a cause ; all more minutely propertied ; each particle which we suppose, but cannot see, of the same quality with the whole : fluid and salt ; one while upbearing, then yielding ; at one time pleasant and salutary for those of a different element, at another, threatening, overwhelming, and destructive ; now, transporting rich freights in safety to the shores, dispensing wealth and luxury, then swallowing without remorse, this merchandise (the sovereign curse of nations,) and bringing ruin, as indeed is just, on those who rest their hopes and fortunes on such trash. Thou, too, great sea ! endless in thy relations.

“ Thy movements observe a method even in their roughness : one while thy waves overstep their present limits, the pebbles on the strand are seen no more, thy presence hides them, and they chase and fret, obscurely warring with each other, where no witness is to tell the fate and history which must belong to each. They, by their causes, are, where we observe them, still passive ; they are removed, or broken, or rest, or remain a whole ; or are collected, some fused, some ground on roads and then manure the fields ; or else are washed along, now backwards, then onwards again, traversing the uneven bottom of the deep from shore to shore. Again the waves retire.

the sand is wet, the sun compels from it a contribution, and it is dry ; these changes regular, flux and reflux, marking periods, and obedient to some other power ? What other power ? The moon, they say ; but this is perhaps a fable, coincidence is not causation ; still by *some* power governed in this regular work ; again connecting the great sea with unknown things, an endless series of relations." 51-2-3-4.

Some apology may be necessary for the length of this and some other extracts—indeed for the introduction of a metaphysical article at all, into a journal devoted to practical medicine. It is very seldom that we shall be guilty of such trespasses on our general plan ; but the nature of the subject may plead our excuse on this occasion. In our next number, we shall, probably, take up the physiological part of the volume, which may be more to the purpose. In the mean time, we entreat Mr. Pring to coolly reflect on what he has done, and what we have said. The events of the next twenty years may furnish, perchance, a memorable commentary on both.

VI.

Lectures on the Structure and Physiology of the Parts composing the Skeleton, and on the Diseases of the Bones and Joints of the Human Body, preceded by some Observations on the Influence of the Brain and Nerves delivered before the Royal College of Surgeons of London, in the Summer of the Year 1820. By James Wilson, F. R. S. Professor of Anatomy and Surgery to the College, Lecturer of Anatomy and Surgery at the Hunterian School in Great Windmill-Street, and one of the Vice Presidents of the Medico-Chirurgical Society of London. London, 1820. One vol. 8vo, pp. 416. Burgess & Co.

"Ossa sub incurvis extabant arida Lumbis ;
 "Anserat articulos macies, Genuumque tumebat
 "Orbis."

THIS work consists of fifteen lectures, and a short appendix. The first lecture is introductory, but contains many interesting observations on the brain and nervous system, in which Mr. Wilson takes an opportunity of passing a deserved eulogy on the erudite and valuable work of Dr. John Cooke.* The

* Treatise on Nervous Diseases.

2d lecture is "on the structure of bone, periosteum, and marrow;"—the 3d "on the formation of bone, the structure of cartilage and ligaments, the properties of synovia, and the strength and motion of joints." The subject of the *fourth* lecture is the structure, formation, and time of appearance of the temporary and permanent teeth. The *fifth* lecture embraces general observations on the human skeleton. The *sixth* is on the situation, connexion, motion, &c. of the upper and lower extremities. The *seventh* on RICKETS, particularly as affecting the spine and pelvis. The *eighth* lecture is on inflammation, suppuration, and ulceration of bone; embracing simple fracture and subsequent union. The *ninth* is on the treatment of fractures, simple and compound. The *tenth* lecture is on fracture of the neck of the femur, mollities ossium, &c. &c. The *eleventh* is on exostosis, necrosis, and exfoliation of bone. The *twelfth* is on diseases of the joints. The *thirteenth* is on inflammation of the synovial membrane, &c. The *fourteenth* is on scrofula generally, and on scrofulous affections of joints. The *last* lecture is on abscesses of the hip-joint, and on incurvations of the spine from carious vertebræ. The *appendix* is on the form and particular situation of the different classes of the adult teeth.

From this enumeration it will be sufficiently obvious that the work contains a great mass of important, elementary, and other matter, which it is impracticable to analyze, as Mr. Wilson's language is too didactic and precise to admit of much abbreviation. We have, on this account, determined to take a single lecture for analysis; as this will afford a specimen of the matter and manner of the publication, without leading us into that desultory patch-work species of medical reviewing, which grasps at much and does nothing—save blind the understanding by bewildering the sense. When, therefore, we cannot present a continuous and distinct view of a work, we shall generally select a portion of it, and do that portion justice. This, we imagine, will be found the most advantageous plan, ultimately, for every party concerned—and, at all events, it is indispensable to the spirit and design of this journal, which aims at other attractions than the splendour of variety and gloss of novelty to embellish the first few hours of an ephemeral existence.

We shall select the seventh lecture, the subject of which is RICKETS, for the present article.

We now know that bones have life, nerves, vessels, and nearly the same general structure as the soft parts of the body; "although their active powers of life, and extent of vascularity are less, on account of their requiring a greater degree of solidity, and stronger cohesion of their component parts."

As a large portion, however, of inert matter (phosphate of lime) enters into their composition, the performance of their internal actions must be more difficult and slow than in more highly organized structures:—the diseases of bones must therefore be necessarily of longer continuance. Mr. Wilson thinks that rickets arise from a deficiency of some of the materials which should enter into the composition of bone, since in this disease they lose their characteristic qualities of hardness and tenacity, bending under the weight which they ought to support, or becoming crooked by the effect of muscular action. This disposition shows itself at a very early period of existence—even in utero; but the more usual period of its occurrence is between the eighth month and the end of the second year. When it attacks after puberty, it is principally the spine, which suffers considerable lateral incurvation, more frequently happening in the female than in the male. Although often combined with scrofula, Mr. Wilson avers that its effects are distinct from those of the latter disease.

“The softening of the bones in rickets has been variously accounted for. It has been supposed by some Nosologists to arise from an excess of acid decomposing the phosphate of lime; by others, from the constitution not providing enough of this material; some have imagined that it is produced by the absorbent vessels having a morbid disposition to remove too much of this phosphate after it had been deposited in the bones; others have supposed it to originate from the arteries of the bones being deficient in the power of secreting phosphate of lime from the blood, and thus not depositing it in sufficient quantity in their substance. But we possess no proofs of excess of acid, or of any acid whatever being generated; for none has been found peculiar to rickety patients by any chymical, or other tests yet known. In rickety constitutions there does not appear to be any deficiency of the phosphate of lime in the blood generally; for in incurvations of the spine a redundancy of osseous matter is often pressed out on the bent side. This matter in rickety persons, is sometimes deposited in large quantities in parts not intended to be bony or even hard; and the urine of such persons is often found to be highly saturated with the phosphate of lime; moreover the absorbents do not remove it when deposited on the surface of the bones, or in parts external to them and unconnected with them. All these circumstances give greater probability to the opinion which presumes that the arteries of bones are deficient in the power of separating the phosphate of lime from the blood, so as to deposit it in sufficient quantity in their substance, than that any deficiency of this material exists in the body.” 164.

In children of an early age there are certain *constitutional* indicia of the presence of rickets; but in later periods of life the disease is principally marked by the local affections it

produces. These constitutional indicia are—diminished digestive powers, while the appetite is often voracious—swelled abdomen—flatulency—emaciation—relaxed bowels. The countenance, however, is lively, the eyes bright—and the intellectual powers precocious: probably from the inactivity of the animal functions, and association with seniors.*

“As the disease proceeds, the skin becomes dry and scaly, the teeth become black and decayed; the weight of the body cannot be supported in any position without producing curvatures of the bones; the natural functions of the internal organs are interrupted, the lungs become tuberculated and consumptive, and hectic symptoms arise, which are terminated by death.” 166.

Nature often makes an effort to stop the progress of the disease, and this effort should be watched, and seconded by art. When the constitution is strengthened by good air, diet, and attention to the rules of Hygiene, the disease will not only stop, but the crooked bones will become straight, even without the aid of instruments. Of this Mr. Wilson has witnessed several instances. Our author has, for many years, been in the habit of demonstrating in his lectures, the wisdom of nature in depositing abundance of osseous matter, when the bones begin to recover from the disease, at the part where it is most wanted—viz. on the inner part of the concave surface of their curve.

“Dr. Wm. Hunter, whose experience in the diseases of children was most extensive, recommended in rickets the constant use of those means which tend to strengthen the constitution: and he asserted that cold bathing corrected this habit more than any other remedy yet known, indeed that rickets, almost with certainty, could be prevented by the use of cold water; sea water, if the patient was near the sea, if not, spring water, the temperature of this being more constant than that of river water, and the use of it generally bringing on a healthy glow. The children, he observed, should be dipped daily, and only once at each period; they should be dried quickly, and friction by coarse linen or flannel, should be applied to their backs and limbs for a considerable time afterward; that great attention should be

* It is asserted by many good authors, and among others by Barthez and Portal that there is a precocious developement of the intellectual powers, independently of moral causes, but as a characteristic feature of rickets. The organs of sense, especially those of sight and hearing, have a much greater degree of energy of function than in other children, and the volume of the brain is proportionably large. The bones composing the cranium, being soft, easily give way to this premature developement of the cerebral mass, and its intellectual functions, the precocious energy of the latter, however, being of short duration; for when the disease has advanced, the child becomes gradually more and more stupid.

paid to their breathing pure air, of a regular temperature, to cleanliness, wholesome food, and the state of the digestive organs. Let me add, that I have seen this system persevered in in many cases of rickets in all with some, and in most with very decided advantage to the patient." 168.

In very young children, Mr. Wilson thinks that instruments should never be applied to the limbs. They cannot either be necessary or useful; while by their weight and by preventing exercise, they must tend to increase the general debility. Their application should be deferred till the bones of the trunk have attained some firmness, and till those of the limb are hard enough not to be injured by the weight and pressure.

Incurvations of the spine are of two kinds—one from rickets, in which case the bend is usually to one side:—the other from caries of the bodies of the vertebræ, when the bend, of course, is forwards. It is to the first species (lateral) that the following observations apply.

In a female constitution merely weak, and without scrofulous affection of the other bones, the habit of continuing in a particular leaning attitude will often bring on this inclination, and in a rickety constitution, will certainly produce it.

"When a bend has once been established, the superincumbent weight is thrown upon that part now in an unfavourable form for bearing it, and this of course increases the curve. Whenever there is a tendency to deviate from the perpendicular, the curve will continue to increase, or an attempt to counteract it, by a curve in another part of the spine, and in the opposite direction, will take place. We thus find, that in rickets the spine is bent serpentinely and laterally, resembling the italic *f*, and is not, as in caries of the vertebræ, bent suddenly and forwards; and we often meet with several of these lateral curves from the attempts successively made to support the weight more favourably by counteraction." 173.

As there is generally more than one curve, it is evident that the altered shape of the spine cannot be owing to the greater contraction of the muscles on one side; nor to a partial deficiency of bony matter, since a redundancy of it is pressed out on the weak side. "It is, therefore, thinks our author, a fair inference that the curve is produced by weight or pressure having been long or frequently applied to a particular surface of the bones, in constitutions where, although every part of the bones has an equal supply of the phosphate of lime, yet in all of them, that supply is less than in strong and healthy bones."

The affection of the vertebral column often begins after the pelvis is well and fully formed, and therefore when the latter is not likely to be altered in shape, unless some constant

and artificial pressure is made on certain parts of it. This should be borne in mind in all cases of spinal distortions in females. Mr. Wilson feels confident, that if timely attended to, such incurvations may, in general, be removed or remedied without mechanical instruments being employed, or any other distressing and violent means being used; "and that by this timely attention, the lives of many mothers and children may be saved, in cases where either mother or child, or perhaps both, must otherwise perish."

Although curvatures of the spine may be readily seen, and easily felt, by passing the fingers along the spinous processes when the patient stands before us, yet if she bends forward, without external support, the lateral curvations will often disappear. If she is admonished to hold herself erect too, and makes the attempt, she can immediately straighten her spine, and retain it a few seconds in its proper form. When this is the case, we may entertain well-founded hopes of a perfect recovery.

"And when the spine cannot in either of the above attitudes be rendered perfectly straight, we may still entertain no doubt of being able to arrest the progress and meliorate the effects of the disease, by calling the natural powers of the body into proper action." 177.

Here our intelligent author adverts to the wonderful and beautiful mechanism of the spine, and the strength and motion it possesses from the combination of bones and muscles. Large masses of the latter are placed between the spinous and transverse processes of the vertebræ and the angles of the ribs, for the purposes of supporting the weight of the head and upper extremities, and of varying the position of the chest and rest of the trunk. It is well known that these muscles are equal in power on both sides, and equally employed to support the spine in the natural erect position of the body.

"It is by calling these muscles into regular and frequent action, that the spine is to be restored to its natural shape and form, in cases where from weakness or rickets that form has been departed from." 177.

Mr. Wilson then goes on to observe that many complicated, and some ingenious instruments have been invented for taking off the weight of the head and upper extremities from the spine; and were this the only thing they accomplished, they in many cases, would prove useful; but they too often throw the weight upon other bones that may and do bend under it.

"In the application of all the instruments that I have seen which would admit of loco-motion to the body, the weight, although removed from the vertebral column, has been thrown upon the pelvis: either professedly so, or in a way a little disguised: and as the bones

of the pelvis are not so hard in such patients as in persons who have no rickety disposition, the upper part or spine of the ilium on each side on which the weight is generally made to rest, is bent forwards, in consequence of which the pubes and ilia, where these bones form the forepart of the brim of the pelvis, bend inwards, and diminish the aperture of that cavity so much, that the head of a child cannot even enter it, which to be born naturally should pass gradually through it. The preparations which I now produce are frightful, but useful examples of this distortion of the bones of the pelvis." 178.

Mr. Wilson has examined very many cases of incurvated spines, in women who could not afford expensive instruments, and in these he has found the pelvis so perfectly well formed as to allow the birth of living children, even where the spinal incurvations had been considerable and of long standing. On the contrary, he has examined other cases, where the affluence of the parties has enabled them to procure instruments, and in all of these he found the bones of the pelvis irreparably injured by having yielded to the additional burthen thrown on them, where they were not calculated to bear much weight. Specimens of this destructive practice were here shown to the auditors by Mr. Wilson.

Such instruments as are fixed to parts, not of the patient's body, as chairs, or the ceiling of the room, may prove useful by taking off the weight from the spine; and, on the same principle, the horizontal position is beneficial.

"When seated, the chair may have an upright back, but no elbows or arms to it, for these would form a partial rest, which might prevent the muscles of the spine from being called into equal action, and it is by this equal action that the cure is to be effected." 180.

Here Mr. Wilson candidly acknowledges his obligations to Mr. Grant of Bath, for the first hints of curing this affection of the spine by the regular and uniform action of the muscles belonging to it.

"In an accidental conversation, he informed me, that he had proposed to cure the lateral incurvation of the spine, by placing a weight on the head of the patient, on the principle of producing frequent and equal action of the vertebral muscles; but that he seldom could convince, either the mothers, or even the medical men whom he had met in consultation, that by this weight he should succeed in effecting his object. His practice immediately struck me as founded on just physiological principles, and I told him that I had then a favourable opportunity of beginning a trial of it. On that very day I began the trial, and the event in three weeks exceeded my most sanguine expectations of success. Several years have passed since my conversation with Mr. Grant, but I have tried the plan in very many instances during the last sixteen years, and in no one, where it was properly persevered in, have I found it to fail in preventing

the further progress of the disease, and in many I have witnessed it effecting a perfect cure, at least so perfect that no deformity was perceived, nor inconvenience in other respects suffered." 181.

Mr. Wilson illustrates the principle of the treatment thus : "if, says he, a finger is held up, and bent a little, a weight being placed on its tip, either will bend it completely, or oblige it to straighten itself so as to enable it to bear the weight when applied to it perpendicularly." It is in this way that the spine being bent in one or more directions, when a weight is added to the head, it directly and almost instinctively, by the action of its muscles, straightens itself to bear that weight ; and this action often renewed, and persevered in for a moderate time, will recover the spine from the bend that otherwise must have increased ; or in the attempt to remove it by instruments applied to the pelvis, their weight, and that of the body, must have effected and distorted that part, the perfect shape of which is important, not merely to the symmetry, but to the life of the mother, or to the existence of the child.

"The weight may be used in the manner following : a small footstool, covered with a flat cushion, being inverted, may be placed on the patient's head, the hollow between the feet of the stool will allow of some substance, varying between four and ten pounds in weight, for it may be necessary to increase it to the last amount although much less is generally sufficient, to be placed in it ; the patient should be instructed to raise this with both her arms, and support it on the crown of her head, elevating the spine at the same time towards the stool while held over her head ; she then, preserving the most erect attitude she can, should walk in a straight line, as soldiers are taught to march, and for a time not exceeding ten minutes ; this should be repeated occasionally during the day. By degrees she will learn to balance the weight, and this occasional exertion, giving the muscles their true action, will straighten the spine much more effectually and sooner than any mechanical instruments.

"The patient should be frequently reminded by her attendants to sit upright, and the momentary attempt to do this, even if the attitude cannot be long persevered in, will prove useful in forwarding the recovery. Negro women and basket women, who early in life have been accustomed to carry heavy burthens on their heads are never crooked." 183.

Various other modes of exercising the chest and limbs, in a regular, equal, and natural manner, will readily suggest themselves to every medical practitioner who has studied the formation of the skeleton, and the action of the principal muscles which are affixed to it, and move its several parts upon each other. The use of the cold and shower bath will aid the effect of the above exercise.

"In children a large towel dipped in cold spring water, and allowed to fall from the top of the back part of the head to the lower part of the trunk will answer as a good substitute for the bath. The patient should be immediately afterward well dried, and gentle friction used for some little time on the skin, in the direction of the spine. The internal use of the preparations of steel are often serviceable. So far as my own experience goes, I have found the *ferum ammoniatum* on the whole more useful than any other preparation of that substance." 187.

Having now presented our readers with the analysis of a single lecture, as a specimen of the whole, we have little doubt but that the favourable impression which it is calculated to make on unbiassed minds, will induce them to consult the original, and place it among the more valuable depositaries of surgical science for subsequent reference. In respect to the able and worthy author, we can add nothing to what we have said on a former occasion.

VII.

Elements of the Theory and Practice of Physic. designed for the Use of Students. Part 1, including the Symptoms, Pathology, and Treatment of Diseases. By GEORGE GREGORY, M. D. Licentiate of the Royal College of Physicians, and Senior Physician to the Saint George's and Saint James's Infirmary. Octavo, pp. 402, Burgess & Co. London, 1820.

It requires some genius to compose—but it requires much judgment to compile. Systems of physic may be either original, instance Cullen, Darwin, Brown—or compiled, instance that Koran of medical faith, "Thomas's Practice." In our compilations we have generally a reference to, or quotations from, a host of authors, bearing the most contradictory testimony on every subject; one disadvantage attendant on which is, that the inexperienced is much puzzled which theory to believe, or which practice to pursue. There is yet another course, namely, an *eclectic* one, in which the writer adopts what he thinks best from others, or from his own observations, and thus lays down, as it were, but one system of pathology, and one line of practice. The author of a book of this kind, voluntarily incurs a most serious responsibility, inasmuch as the student or practitioner, placing faith in his preceptor's judgment, adopts implicitly his code of instructions. If a work of this kind be ably executed it is far superior to a common compilation—if other-

wise, it is much more dangerous. Dr. Gregory appears to have hazarded this difficult experiment—and on this account we shall deviate, on the present occasion, from our usual analytical course, to pursue a critical one. Dr. Gregory need not imagine, however, that we seat ourselves in the chair of Aristarchus in order to play the critic. If we notice only what we consider imperfections in his work, it is because our whole journal would not contain what we consider to be sound pathology and judicious practice. And truly, if the frame of Dr. Gregory's mind be constituted as it ought to be, and as we believe it is, he will receive our comments in the spirit of that true philosophy which disdains not to listen to the opinions of others, or accept information from whatever quarter it may be offered. We trust that the tone of this critique will evince the object of it—that of promoting public good without hurting private feeling.

Dr. Gregory modestly informs the reader that the present volume “has no pretensions to the title of a system of physic, inasmuch as the author neither undertakes to digest all that has hitherto been written about diseases, nor to explain their varied phenomena on any one hypothesis.”

“The object of the author in this work, is to lay before the student of medicine an elementary view of the present state of the theory and practice of medicine, unbiassed by system; and more particularly to delineate those views of pathology which appear to direct the reasonings, and to give a tone to the language of medical writers at the present period.” *Preface.*

We much doubt the expression—“unbiassed by system,” especially when our author, in the next page, informs us that—“the general design of the volume coincides very nearly with that of Dr. Cullen's First Lines,” which is abundantly systematic. The truth we believe is, that Dr. Gregory has somewhat confounded “system” with “theory,” though the former is connected principally with arrangement or classification, and does not necessarily mix up any hypothesis with the matter. But notwithstanding our author's professed rejection of hypothesis in the first page of his Preface, we have found him indulging slyly in various dark corners as we proceeded, under the mask of “speculations.”

On Dr. Gregory's first class of diseases—fevers, we have few observations to make. Our sentiments respecting fever are now pretty well known, and Dr. G.'s do not differ materially from those which have been maintained in this Journal for many years past. On some points of doctrine and practice, however, we conceive our author to have been led into inconsistency, if not into error. Thus speaking of the treatment of fever generally, our author remarks that—

"There cannot exist a doubt as to the necessity of blood-letting in the genuine inflammatory fever, the *endemic* of hot climates. The violence of that disease, the rapidity of its progress, and the high degree of arterial excitement which characterize it, call for the adoption of a system of measures at once powerful and immediate in their effects. On the first attack, therefore, blood is to be taken from the arm to the extent of twenty or thirty ounces, and in a full stream. This it is frequently necessary to repeat in the course of a few hours, the extent of the evacuation being always regulated by the violence of the symptoms, particularly by the degree of headach, and the fulness of the pulse. These must be diminished without delay, and, though other means are not to be neglected, it is upon venesection that our chief reliance is to be placed." 60.

Yet a little further on, when speaking of the treatment of yellow fever, such as it has appeared epidemically in the West India Islands, in America, Gibraltar, Cadiz, Malaga, &c. our author hazards the following strange and dangerous assertion.

"The severe headach which characterizes the early stages of the disease, naturally suggested blood-letting as a probable means of relief, but experience has proved that, though occasionally, it is not generally beneficial." 103.

How are we to reconcile this contradiction? It is sufficient to say that Dr. Gregory is a convert to the doctrine of a *contagious and imported* epidemic yellow fever.

In the class of eruptive fevers we observe the following passage :

"On dissection of those who die of small-pox during the first or eruptive stage, the mucous membrane of the bronchia, œsophagus, stomach, and intestines, is found in a state of high inflammation. In those who have died under a load of pustules, the same appearances are sometimes traced, but *pustules* are never met with in the cavity of the abdomen. It appears indeed that the mucous coat of the intestinal tract is unsusceptible of them. Variolous pustules however may be observed in great abundance in the mouth, and along the mucous membrane of the *bronchia*, even as low as their bifurcation. This curious distinction between the two great mucous membranes of the body is probably referable to some difference in their anatomical structure." 127.

We know not how Dr. Gregory came to conclude that the mucous membrane of the intestinal tract was unsusceptible of assuming this pustular appearance in small-pox; but we can point out to him several sources of information on this head, which, if attended to, would have prevented this position being so strongly laid down. Dr. Clark states that at the *Maison des Enfants* in Paris, the dissections of variolous patients showed—"inflammation and ulceration of the inter-

nal coat of the intestines, *pustular eruptions there, or on the surface of the peritoneum. &c.*" p. 150. And Mr. Cross and Mr. Hull, in this country, have made the same observation, as may be seen at page 305 of this volume.

In chap. vii. "on laryngeal inflammation," some things have attracted our attention. Dr. Gregory very properly states that "large bleedings are required, and at the onset, they should be pushed so as to produce fainting." But to the precept, that "leeches may be applied to the throat *when the violence of the symptoms has been subdued,*" we cannot give our approbation, since we are well convinced that *local* detractions of blood cannot be too soon employed in this formidable disease, where the simultaneous co-operation of remedies should always be preferred to a lingering succession of them. A little farther on Dr. Gregory observes—"as a last resource, some have recommended tracheotomy; but upon the whole, considering the disadvantageous circumstances under which the operation must be performed, it can scarcely be thought advisable." 234. As a comment on this passage, we shall here introduce a case to which we were an eye-witness, and which for intensity of interest, has no parallel in the annals of surgery. It was originally published in one of the volumes of the *monthly series* of this Journal, which the public most undeservedly suffered to pine in obscurity; consequently its contents are almost entirely unknown to the profession. The following valuable fragment we shall here rescue from oblivion.

"Case of Cyanche Laryngea, requiring Tracheotomy, and the continued Use of a Cannula ever since the Operation."

"Mr. PRICE, jeweller, residing in King's Terrace, Southsea, near Portsmouth, about 30 years of age, and previously unaffected with any complaint of the throat or chest, excepting occasional palpitation of the heart, and sense of uneasiness at the epigastrium, had been for a few days, in the beginning of October, 1816, affected with *Cyanche Tonsillaris*, which was removed by the common antiphlogistic measures. But after exposure to the night air, the inflammation suddenly returned, and now fell on the glottis and other points of the larynx, causing a dreadful sense of suffocation. The pulse was, at this time, little altered, excepting from the alarm into which the patient was thrown. On examination, the epiglottis was brought into view, and, with the neighbouring parts, appeared inflamed. Leeches were immediately applied round the throat, and he was bled from the arm, *ad deliquium*. Blisters succeeded the leeches; and the most powerful cathartics were exhibited. The vapour of warm water and vinegar was inhaled; and the patient by these means was soon relieved. In three days a copious discharge of *apparently purulent matter* took place from the throat, brought off by hawking and



coughing, and giving rise to apprehensions that the previous inflammation had terminated in suppuration or ulceration. This discharge amounted, at one time, to a tea-cup full in twenty-four hours. His breathing was pretty free ; but still he had an unpleasant *vox rauca* : he looked ill, and had some pyrexia. The discharge, however, gradually lessened ; his appetite returned ; and it became evident, that what appeared to be purulent matter, was only a secretion from the inflamed parts.

" When things were in this favourable train, an accidental exposure to a stream of cold air, was almost immediately succeeded by such a difficulty of respiration, as baffled every energetic measure that could be devised for its removal.

" *November 5th, 1816.* In consultation, Dr. Lara, Dr. Denmark, and Dr. Johnson. The respiration is most difficult ; eyes prominent ; cheeks flushed ; lips livid ; forehead and breast covered with a cold, clammy perspiration ; countenance ghastly, and expressive of unutterable and indescribable sufferings ; both sides of the larynx, to below the cricoid cartilage, tender and swelled ; the whole neck tumefied, and red from the sinapisms that had been applied. Death was now rapidly approaching ; and it was very doubtful whether effusion in the lungs had not already taken place. It was unanimously agreed that nothing but tracheotomy could save, or, even for a short time, prolong life. It was also feared by two of the three medical attendants, that such organic derangement had already supervened in the larynx, as would render the operation unsuccessful. But this was no solid reason for abstaining from the *anceps remedium*.

" *Operation, 5, p. m.* Dr. Denmark took the knife. An incision through the integuments from the lower edge of the thyroid gland, to within half an inch of the sternum, was made as nearly as could be guessed, on the line that divides the sterno-hyoid and thyroid muscles of the opposite sides. When these muscles were exposed, however, no such line of division could be perceived, owing, no doubt, to the tumefaction and inflammation of the parts. The incision was therefore carried cautiously through these muscles, in a direction for the trachea. The motion of these muscles, and of those of the neck in general, but of deglutition in particular, was violent, and extremely embarrassing. Several venous and arterial branches were cut, and bled freely, but ceased to bleed without ligature. Anxious to come at the trachea as near the thyroid gland as possible, the right lobe of that body was accidentally entered, in consequence of the convulsive action of the muscles. A principal branch of the inferior thyroid artery of that side sprang, and bled profusely. Dr. Denmark plunged a tenaculum as nearly as possible on it, and Dr. Johnson affixed a ligature. The hæmorrhage continued ; the ligature was instantly cut away ; another plunge was made with the tenaculum, and now the ligature proved successful. It was not thought advisable to advance farther in that direction, and the enlargement of the wound downwards towards the sternum required caution, lest, in the struggles for breath, some large vessel in that

vascular neighbourhood should be divided. At length, after a somewhat tedious dissection, the difficulty of which can only be appreciated by those who see it performed on a living subject gasping and struggling for breath, the trachea was laid bare, at full an inch from the surface. Those who talk about cutting out a piece of a tracheal ring at the bottom of such a cavity as this while the trachea itself is in constant motion, and the surrounding muscles ever altering their relative positions in the efforts at respiration, have probably never practised it. The tube was slit open, with the point of a double-edged scalpel, about a third of an inch, when the hissing of the air backwards and forwards, became very loud. With some difficulty a flattened silver cannula was introduced, when the relief, instantaneously experienced by the unhappy sufferer, may be conceived, but cannot be described. He could hardly be freed from his bloody garments, and propped up in bed, when he fell into a profound sleep! The cannula was secured by means of tapes, adhesive straps, &c. and he slept and breathed tranquilly, till nine o'clock at night, when a fit of coughing displaced the tube and threw him into great distress as well as danger. It was found that the longitudinal opening in the trachea admitted of but a very inadequate ingress and egress of air, when the tube was out; and the introduction of the latter at the bottom of a deep sinus, as the wound was, presented some difficulty. This difficulty was a good deal overcome by the suggestion of Dr. Johnson, viz. that of pushing the end of an elastic gum catheter a little way through the silver cannula, so as to make a *blind end*, which readily went into the opening of the trachea, when the gum catheter was immediately withdrawn, and the cannula left in. A sound and refreshing night's sleep succeeded this long period of restlessness and misery.

"*November 6th.* This morning, the irritation of a foreign body had caused a great secretion of phlegm and mucus throughout the larynx and trachea, and the efforts to cough it up by the mouth and through the cannula were very distressing, and required constant attention. The cannula was repeatedly displaced. Voice and speech were entirely gone of course; but deglutition was easy, and he this day took some brisk purgative medicine. The countenance had regained much of its pristine serenity ever since the operation; the pulse was regular, but quick; and the symptomatic fever was not considerable. His spirits are now good, and he is constantly writing down and answering questions. By the evening of this day, considerable tumefaction had taken place round the wound; the cavity was consequently rendered deeper; the cannula, become too short, was every minute displaced, and would no longer answer. It was always necessary when the tube was removed, to draw one edge of the slit in the trachea apart from the other, by means of a crooked probe or hook, when the patient could breathe with tolerable ease. But the mucous secretion was most tiresome and embarrassing; so much so, that frequently the convulsive struggles to force it up appeared almost decisive of his fate! During the night, a new tube, adapted to the depth of the wound, was many times thrown out, and a surgeon was obliged to be in constant attendance. A strong mer-

curial fœtor this day was discovered in the breath, from some calomel which he had taken with purgative medicine during the previous inflammation.

" 7th. This day a very smart ptyalism developed itself, and the increased flow of saliva from the mouth and fauces added greatly to the patient's other sufferings. The inflammation, however, and tumefaction around the wound, were beginning to subside; and, for the first time since the operation, he could articulate a little. When the tube was now displaced by accident or design, the dyspnœa was not quite so distressing as at first; and upon the whole, a gleam of hope broke through the clouds, and gave anticipation of final success. The bowels were kept very free to-day, in hopes of checking the ptyalism, which was still profuse; but the countenance was cheerful and serene, excepting during a paroxysm of coughing.

" 8th. Has passed a good night; the tube was twice displaced by coughing, but easily reinstated. This morning, the artificial passage was closed with the finger, and he breathed by the mouth; but the difficulty was as great as previous to the operation; so that nothing but time has yet been gained. The cannula of a common trochar introduced on a bougie that just fills its calibre, answers best now.

" 9th. Has had a good deal of fever last night; and complained of pain and coldness of the lower extremities. Expectorates much viscid phlegm and mucus, which have a very disagreeable fœtor.

10th. A feverish and restless night; was sometimes delirious; but on taking some active purgatives, he has had four copious stools, and the febrile symptoms have subsided.

" 11th. Passed a good night; has no fever; breathes comfortably through the tube and mouth together; and could blow out a candle by the air from his mouth alone, of which he was highly proud. Can speak pretty plain. Inhaled warm aqueous vapour through the tube, which he found very pleasant.

" 12th, 13th, 14th. Little or no alteration.

" 15th. Took out the tube to-day, and closed the wound completely with the finger. The difficulty of breathing was, at first, great; but in a little time it became somewhat easier; and he breathed nearly ten minutes through the natural passage. He is becoming very hoarse, but he sleeps quietly the whole night, and only changes the tube twice in twenty-four hours.

" 20th. He now eats, drinks, and sleeps well. The tube is every day taken out, and he is made to breathe through the natural passage, as long as he conveniently can; but it is evident that the original obstruction remains. He expectorates some semi-purulent looking mucus, which smells very badly.

29th. The tube has only been changed every second day since last Report. On withdrawing it to-day, he breathed with great difficulty, and we were forced to introduce it with considerable despatch, as he seemed to be suffocating. There is now every appearance of a tedious or doubtful issue, after all our exertions!

" December 16th. Six weeks have now elapsed since the operation. His voice is scarcely audible. He cannot breathe at all, but

through the tube. We tried to pass down a curved elastic tube through the rima glottidis, but without success. A finger was passed behind the epiglottis, but the opening into the larynx could not be felt; neither could any morbid structure or ulceration be discovered. Linimentum hydrargyri was directed to be rubbed over the region of the larynx, which evidently brought on a slight ptialism. An occasional intermission of the pulse is now observable, and he has palpitation of the heart.

"30th. Or fifty-six days after the operation, he coughed up through the tube a piece of apparently carious bone of a cancellated structure, and supposed to be a piece of what is termed ossified thyroid or cricoid cartilage. In other respects he is much the same as before.

"January 1st, 1817. Last night he felt a piece of bone fall down into the lungs, and has ever since been in a dreadful state of coughing. He feels the piece come up to the tube, but as it cannot get out, it falls back, and keeps him in constant agitation. Something decisive must now be done. The Cannula A was therefore quickly constructed, and being much larger in the bore than the one previously in use, besides having its inner orifice turned downwards to facilitate the escape of any solid body, it was forced into the wound with some difficulty. The good effects were soon felt; for shortly afterward, in a violent convulsive cough he threw out the piece of bone [or rather calcareous deposition] No. 1, quite across the room where he was sitting! He was immediately relieved. What was very curious, the piece of ossification was larger than the calibre of the tube, and could not be made to enter it afterward, in any position. After this he threw out several pieces of the same substance: some of which are represented in the plan: but the tube A gave him so much ease, and answered so well, that he wore no other kind for many months afterward.

"March 18th, 1817. Has continued in good health since last report, and can breathe a few minutes with the tube corked, which is the usual way of exercising the natural passage. He went to London this day, and consulted Mr. Astley Cooper and others, who recommended patience, fumigations, &c. but did not think that any thing in the operation way could be done.

"He remained a month or six weeks in London; and then returned to this place. By corking the tube several times a day, he at last acquired the power of keeping it so, and of breathing through the mouth for several hours at a time; but he thought it hurt his health; and, latterly, he seldom stops the tube, excepting when he wishes to speak, which he can do plainly enough by placing his finger on the tube. The cannula B is that which he has worn for the last two or three months, and it gives little or no uneasiness.

"December 5th, 1817. ONE YEAR AND ONE MONTH have now elapsed since the operation was performed; and the tube is worn without inconvenience, being merely taken out twice a week to clean, and immediately replaced. His health is as good as at almost any period of his life. There is a slight tumefaction, and also a consi-

derable induration around the wound, from which a discharge proceeds as if from an issue. The actual site or nature of the obstruction in the larynx cannot be ascertained; and nothing but time can determine the result of this case, which stands unique in the annals of surgery.

Three years have passed away since the above case was published, and the patient still lives and breathes through the tube. He is otherwise in good health. We believe that we need not comment farther on Dr. Gregory's condemnation of tracheotomy, especially as it is well known to the profession, that several other cases of bronchotomy have within these few years terminated successfully, and saved the lives of the patients.

Upon diseases of the heart and of the liver, Dr. Gregory is less copious than we could have wished. In the section on dysentery we have observed a good deal that we cannot entirely approve. Dr. Gregory allows that, in all severe cases of this disease, there is inflammation and much morbid irritability of the mucous membrane of the intestines. Yet strange enough, he says that—"the employment of *purgatives* constitutes the most important part of the treatment." We would be glad to know on what principle the irritation of purgatives is superadded to the irritation already existing in the mucous membrane?—but leaving theory aside, it is well known to all those who have treated dysentery, at the bedside, that the practice of purgation is exceedingly distressing in severe cases—while, in mild ones it keeps up the disease much longer than is generally necessary for a cure, besides adding greatly to the sufferings of the patient.

"In hot climates, the exhibition of mercury, pushed so as to produce salivation, has been supposed by some, to be an effectual method of putting a check to the advances of the disease. The testimonies in favour of this practice are certainly very strong, but at the same time it is to be observed, that we have no reason to believe that a vigorous and well-regulated employment of the means already recommended, is less efficacious in hot climates than we find it in our own." 313.

Now, from some little experience, we are enabled to assure Dr. Gregory, that instead of there being *no reason to believe* that those means which he enumerates would be less efficacious in tropical climates than the mercurial treatment, there is *direct proof* of their efficacy.

The foregoing are the principal objections which we have to urge against the work before us; and truly they are very few. For the rest, it appears to us, in most places, to be very neatly compiled or composed; and, upon the whole, is very creditable to the good sense and judgment of the author.

VIII.

A Dissertation on Infanticide, in its Relations to Physiology and Jurisprudence. By WILLIAM HUTCHINSON, M. D. F. L. S. Octavo, pp. 99. London, 1820.

IT is curious to observe the difference which a few parallels of longitude make in our moral sentiments, religious feelings, and legal obligations. We have seen the crime, which occupies the work before us, perpetrated without the least compunctious visitings of conscience, or danger of jurisprudential retribution. Parents every day commit their offspring alive to the rivers or streets of China, with as little ceremony as we would a litter of kittens or a useless puppy. Such are the effects of a population arrived at its ultimatum. We know not but this may yet be the state of England. In the mean time, Nature still cries out against infanticide here, and the law inflicts a severe penalty on the commission of it. Our readers are all aware that, till very lately, medical jurisprudence was greatly neglected in this country. The example of our continental brethren, however, has now roused the attention of English writers, and, to our knowledge, five authors are, at this moment, preparing for the press, massive volumes of translations, compilations, abridgments, and analyses of German and other continental works on legal medicine. Dr. Hutchinson, however, will probably anticipate them all. The literary appetite of this gentleman might well compete with that of DOMINE SAMPSON; and his literary lucubrations are truly "prodigious." In his late controversy with Dr. Wilson Philip, he states that the proemium to the 43d volume of the Medical and Physical Journal (of which periodical work Dr. Hutchinson avows himself, in the book before us, to be the conductor) was written in a fortnight, while, of course, he had the usual labour of editing the Journal on his hands besides. Now as this proemium professes to lay before us the semi-annual progress of medicine and its auxiliary branches, in Europe, America, and great part of the civilized globe, containing reviews of, quotations from, or references to, several hundred volumes, (many of which were supposed never to have seen this country,) we do again assert, that Dr. Hutchinson's literary powers are not only "prodigious," but, that they appear to us almost superhuman, and in a darker age, would certainly have afforded suspicion that the author had assistance from the BLACK ART. It excited surprise that Dr. Johnson should have written his *Rasselas* in ten days. But what was this tale of fancy, compared to the learned

and accurate proemium of Dr. Hutchinson?—a sonnet to a cyclopædia.—Far be it from us to admit the sarcastic insinuation thrown out by Dr. Philip—that the reading of a work, and the reviewing thereof, have no necessary connexion in some systems of things. No, no! This would be admitting a doctrine that saps the foundation of our own calling. We solemnly affirm, then, that *all* reviewers peruse carefully *all* works, and are intimately acquainted with *all* subjects, practical, theoretical, physical, and metaphysical. We moreover declare, in the name and behalf of the whole critical brotherhood, that *no* work is ever slurred over, or carelessly quoted—that *no* perversion of an author's sentiments is ever exhibited in a review*—that *no* puffs are ever inserted in the shape of criticisms—that *no* secret influence could induce a reviewer to laud a Charlatan, and vituperate a Cooper—that *no* reviewer is under the slightest control of a publisher or proprietor, but on the contrary, is the sole arbiter of his own actions—that *no* reviewer did ever openly advocate the cause of a quack, or wilfully caricature the experiments of a Philip and a Brodie—that *no* reviewer did ever crouch before a tyrant master, or renowned infidel knight, and publish in a medical journal the raving rhapsodies about "moon and motion" engendered in the chaotic brain of a radical Sheriff—that *no* reviewer did ever admit the assistance of *auto-criticism* from certain modest authors; although such a proceeding would be perfectly justifiable, since who can pretend to so

* And here we cannot help remonstrating most angrily with Dr. Halloran of Cork, on account of the following passage, which he lately wrote to a friend of his in London, and which appears to be in unison with the Worcester-shire *Philippics*.

"I have passed muster (says Dr. Halloran, speaking of his work on *Insanity*) as far as I know, tolerably well with the reviewers, except with the *Medical and Physical Journal*; in which a critique appeared, in my mind, the most unwarrantable and inconsistent I ever met with. In that critique, I am dragged before the public as having entirely failed in a department of medical science on which *I had not entered*, and which, I expressed my determination to avoid. In having maintained this resolution throughout, I am taxed with gross ignorance on *all* subjects connected with pathology, and am set down as—a friend to *materialism*! Shame on such reviewers! I did not hesitate to communicate my sentiments to the author of this ridiculous tirade, given, as is obvious, with no better view, than as a prelude to those favourite sentiments of which the individual seems not a little vain. He appears somewhat fretted by my observations; and so he well might, though he deserved much more. I do not know his name, nor do I care to do so. He wrote to me in reply, but did not append his signature."

Lest Dr. Halloran should accuse *us too* of misrepresenting his sentiments, we have kept an attested copy of the passage, though we are quite sure that Dr. H. is all in the wrong, for a reviewer *cannot* err.

intimate an acquaintance with the contents of a work, as the man who wrote it?—that no reviewer did ever place a book for review in the hands of the professed enemy or rival of its author; although such a step would also be perfectly lawful, and even desirable, since it would ensure a *long* critique without any expense, and without the least risk of fulsome adulation—finally, that *all* these things are strictly true, “without, (as Dr. Harrington would say,) one single anomaly.”

But to return from this digression in defence of critics. We think that Dr. Hutchinson's compilation, (which we take to be a more proper title than “dissertation”) is a useful, or at least a respectable little work, its greatest fault being one that seems inseparable from every thing connected with *law*—namely, *verbiage*. Neither can its English dress conceal its foreign origin, as some *minutiæ* will presently evince. We shall endeavour therefore, chiefly for the benefit of those who may not have an opportunity of furnishing themselves with the work itself, to draw up a concise analysis of its most prominent and useful features, disentangling, as far as we can, the ideas from the load of words with which they are frequently oppressed and obscured.

Infanticide, according to law, is the destruction of a child's life, either during its birth, or within a few days after it is born. We shall pass over the first five sections of the work, containing common-place directions respecting our conduct in proceeding to examine the body of a child, supposed to be murdered. In the sixth section the anatomical examination of the body is discussed; and here we are somewhat *Hibernically* directed, in noticing “the *external* appearances,” and before any dissection, to first examine whether the child has had the misfortune to be born without a head, brain, lungs, heart, or alimentary canal. P. 7. An acephalous infant might certainly be easily recognized, without dissection; but how a surgeon is to ascertain that a child has, or has not a heart or intestines, “before he begins to dissect any part of it,” this deponent knoweth not.

Here our author makes a long digression on the progressive developement of the *fœtus*, *ab ovo usque ad partum*. We shall only be able to present a few specimens of the *valuable and minute* observations of our foreign medico-legal physiologists. We shall begin at a *comparatively* advanced period of man's rise in this world—namely at the 30th day of utero-gestation, when he is as large as an *ant*, according to Aristotle—as a *barley-corn*, according to Burton—as a *fly*, according to others—as the *malleus* of the *tympaum*, according to Baudelocque. P. 7.—At 45 days, the length of the



fœtus is about ten lines—at 60 it is two inches long—at the end of the 5th month the mother quickens, and at that period it is important to know that—"the scrotum is of a bright red (not blue) colour." But when we had read nearly six pages of this minute description, we were warned, that after all, the structure of the soft parts would not afford any positive evidence, "because diversities in this respect will exist from varieties in the age and constitution of the mother, and from other circumstances affecting especially the fœtus itself." 12. Here then, as in most other cases of German minuteness, we have rolled the stone up to the top of the hill, only to have the mortification to see it roll down again, with much more velocity.

M. Beclard appears to have arrived at more satisfactory conclusions respecting the age of the embryo, by osteological researches.

"After two months have elapsed from the period of conception, the skeleton is about 4 inches and 3 lines in length; that of the spine being 2 inches. At three months, the former is 6 inches, and the proportion of the spine as $2\frac{1}{2}$ to 6. At 4 months and a half, it is 9 inches, and the spine 4; at six months, 12 inches, the spine 5; at $7\frac{1}{2}$ months, 15 inches, the spine $6\frac{1}{2}$; at nine months, or the period of birth, it is ordinarily from 16 to 20 inches in length, or at a medium, 18; and the spine is in the proportion of $7\frac{1}{2}$ to 18 to the whole length of the body. These calculations were made from observations on about fifty fœtuses, at each of the periods above indicated." 13.

Dr. Hutchinson cites numerous authorities respecting the *weight* of the fœtus, at the full term of utero-gestation; but all is discordance here too. An average weight may probably be stated at six or seven pounds. The *length* of the fœtus at the full term "is ordinarily from nineteen to twenty-two inches."

The external marks of violence are to be carefully examined. We know that superficial livid marks, on the under surfaces of dead bodies, arising from stagnation of the blood in the small vessels of the skin, may be regarded by the ignorant as signs of violence; but a layer of the skin being removed, shows that the lividity is confined to that organ solely.

Infants are most commonly destroyed by wounds, contusions, and strangulation.

Wounds. It is always important to ascertain whether these have been made during life, or after death. In the former case they present red or bloody surfaces, with ecchymosis; and when death has not instantly followed their infliction, their edges will be somewhat tumid and retracted,

the surrounding skin being of a reddish hue. When several days have elapsed, they will, of course, present symptoms of the suppurative process.

When the wounds have been inflicted on the body after the circulation of the blood has ceased, and the body has become cold, the blood being coagulated in the vessels, their surfaces will be pale, and without tumefaction, retraction, or surrounding ecchymosis. These characters, however, will not be near so distinct when the wounds have been inflicted soon after death; the body being yet warm, the blood fluid, and the muscles retaining some degree of contractility.

Contusions. These, when effected during life, are always accompanied by more or less ecchymosis. When this is superficial, and the subject outlives its production, the part presents a red or bluish spot, soon assuming a deep livid or leaden hue, changing afterward to a yellow, and requiring seven or eight days for its ultimate disappearance.

Post mortem bruises are of a deep, or purplish brown colour, attended with no diffused infiltration of blood in the cellular tissue, or elevation of the skin. Here, however, as in almost every part of infanticide, the "glorious uncertainty of the law," is eclipsed by the yet more glorious uncertainty of legal medicine, and every conclusion ends in—nothing being concluded.

"It should be borne in mind that the child may suffer such a degree of pressure, and other violence, during parturition, that there will be found in different parts of its body, after its birth, *ecchymoses, tumefactions, fractures of the bones, and laxations of the joints.*" 24.

This legal medicine will afford excellent materials for the bench. When it comes to be studied by *lawyers*, there will be an end to conviction of crime, for it will be absolutely impossible to prove any one thing, as far as the medical evidence is concerned!

Suffocation. The external indications of this are redness or lividness, with tumefaction of the face, prominence and redness of the eyes, projection of the tongue from the mouth, and a frothy oozing of mucus from the same. All these, however, may be produced "by the viscid mucus, naturally existing about the pharynx and glottis in newly-born infants, getting into the trachea, especially if the infant has lain on its back for some time after its delivery." 27. As for a livid circle round the neck, which might induce a common spectator to suspect the operation of a ligature, the medico-legal investigator will show that this is "capable of being produced by rigid and forcible contraction of the orifice of the



uterus, or from the navel-string being twisted round the neck of the infant, which may have suffocated it." 28. We do not see that an internal examination removes this source of uncertainty; for if the funis may strangle the infant, without flattening the trachea or larynx, so may a garter or handkerchief applied with a similar degree of tightness. In short, we are here, as usual, left in doubt and uncertainty.

On the subject of the umbilical cord, nothing is decided but that every thing is uncertain. The child may or may not bleed to death, if the cord be cut and not tied; or if it be left untied, and in continuity with the placenta. A learned list of German disputants, to the number of fourteen or fifteen, with the titles of all their disputations, is given at page 30 of our author's work. These worthies had a tremendous paper war, towards the close of the seventeenth century, "respecting the necessity of tying the cord to prevent hæmorrhage." Peace to their tomes! They are not likely to be ever opened in this country but by Dr. Hutchinson himself.

The signs of a child having died from umbilical hæmorrhage are stated to be a bluish or dull pallid colour of the whole surface of the body, paleness of the viscera, want of blood in the large vessels, especially the veins, and in the cavities of the heart.

"But such effects cannot be attributed to hæmorrhage from the navel-string, except when no other means for its occurrence are present, and when the body of the infant appears to be well constituted, with a full and free developement of the cord. When this part is shrivelled, in a body recently born, and its vessels in a state of extreme collapse, it may be supposed that the infant wanted blood for some time before its birth.

"Should there be evidence of hæmorrhage from the umbilical arteries or their ramifications, it must be borne in mind, that it might have taken place from the placenta during labour; or, as Mr. John Burns states, rupture of the vessels of the cord may have happened at that time, and fatal hæmorrhage thence resulted." 32.

This leaves us, of course, in the region of conjecture, where we began.

Into the long and minute directions for opening the head, spinal canal, and thorax, we shall not enter, as they are familiar to every one who knows the anatomy of the body, and to others they are unintelligible. The thorax, however, leads to a host of physiological digressions and discussions relative to "the peculiarities of the foetal circulation—the changes effected in the lungs and their blood-vessels by respiration—the theory of the several tests to which the lungs have been exposed in relation to the subject of infanticide—and the appearances produced in the same organs by drowning and res-

piration of deleterious gases." In wading through the contradictory and unsatisfactory statements and tests respecting the lungs of infants, and the fact of respiration having been commenced or not, we did curse the hour when first we undertook the task of reviewing, and also the man who first invented forensic medicine, to puzzle the brains of judge, jury, counsellor, and doctor! After labouring for some hours to come to something like a conclusion, the following statement plunged us in despair, and very nearly induced us to plunge book and manuscript into the fire.

"Lecieux relates the results of four hundred examinations of bodies of children, made at the Hospice de la Maternité, at Paris, for the purpose of furnishing some evidence on this subject; and the results of them are almost as various as it was possible for them to have been within a certain range." 55.

Although theories are seldom very satisfactory to any but those who invent them, yet the theory of drowning, at page 64 of Dr. Hutchinson's work, carried complete conviction to our minds the moment we read it. It is beautifully simple; namely, that the cause of death, in drowning, "essentially depends, in the generality of cases, on the *want of air*."

It is not to be expected that the signs of death from drowning are exempted from the cloud of ambiguity which wraps every medico-legal subject in cimmerian darkness. In short, there is not one single *decisive* criterion of a child's having been drowned unless there be present in the water found in the lungs, "pieces of straw, weeds, insects, or other foreign substances similar to what are found in the water when the body was discovered." 65.

Death from the vapour of charcoal is attended, it is said, with several peculiar appearances. The body preserves its heat for a long time after apparent death—there is great accumulation of black and very fluid blood in the veins, and hardly any in the arteries—the vessels of the lungs and brain are especially gorged with this fluid—the face is red, and somewhat tumefied—the eyes are bright, and the lips have a vermilion hue.

Our limits forbid us pursuing the analysis of this little work any farther; nor do we mean to offer any opinion on the merits of the compilation itself. This much we may venture to say, that if every part of medical jurisprudence be handled so minutely as the subject of infanticide, the whole range of our hitherto professional studies will be a mere cipher compared with that of forensic medicine! And after all, we venture to predict that this medico-legal cyclopædia will furnish the means of tenfold more embarrassment to the

medical practitioner, when cited before the tribunals of justice, than he before experienced. We conscientiously declare, that after perusing carefully the treatise on infanticide before us, we should not be able to give one single iota of positive evidence, in a court of law, on the subject which we have been studying, and as derived from anatomical and physiological evidence alone: How far moral and circumstantial evidence might enable us to make up our minds, we cannot say; but without this, all appears to be involved in doubt, and subject to deception. As soon as these medico-legal dissertations get into the hands of lawyers, medical men *must* study the subjects in their own defence—and then God give them power and patience to store their memories with such a load of physical subtleties, together with strength of nerve and quickness of intellect to meet the quibbles and cross-questions of the long-robe gentry, furnished as they will then be with ample materials to “make the worse appear the better cause.”

We cannot close this little volume without again bearing testimony to Dr. Hutchinson's high literary powers and unwearied industry. As an able cotemporary rival we admire his talents for minute research, and we hesitate not publicly to express that admiration. May he respect himself, and never lose sight of integrity, candour, and impartiality, which ought to characterize a medical author, and are not less necessary than talents in the conductor of a public journal!

IX.

Supplemental Review

OF

PRACTICAL MEDICINE;

SELECTED AND ARRANGED, WITH COMMENTARIES.

Paucis libris immorari et innutiri oportet, si velis aliquid trahere, quod in animo fideliter hæreat. SENECA.

*Duo vitia vitanda sunt in cognitionis et scientiæ studio. ***** Alterum est vitium, quod quidam nimis magnam operam conferunt in res obscuras atque difficiles, easdemque non necessarias. CICERO.*

WE now again resume our series of Supplemental Reviews, in which we shall occasionally glance at the original departments of our cotemporary journals in this country. There is no species of medical literature which more requires the healthful process of candid commentary than this, and none which has so generally escaped it, for what good reason we know not. It is not to be supposed, however, that we shall notice *all* the articles of this description which are monthly or quarterly presented for sale in the public mart. That would indeed be a Herculean task! We shall probably appear very fastidious to some of our brethren. To such we recommend a moment's reflection on the two quotations at the head of this article.

§ I. HEAD.

1. *Meatus Auditorius*.* It cannot be concealed that we have made much less progress in the pathology and treatment of diseases of the ear, than of the eye or other organs of the body; nor is it likely that we shall ever be able to do much for those affections of the auditory apparatus which have their seats in the labyrinth, and deeper mansions of the seventh pair of nerves. We may yet, however, as Mr. Earle properly observes, be able to discover causes of deafness in

* On Affections of the Meatus Auditorius Externus. By Henry Earle, Esq. Assistant Surgeon to Bartholemew's Hospital, &c. *Med. Chir. Trans.* Vol. X.

the external ear and cavity of the tympanum, which have not hitherto been described, and which may partake of the nature of diseases affecting other parts of the body, and thus yield to appropriate remedies.

Early in 1816 Mr. Earle was consulted by a young officer, who stated that, from childhood, he had been subject to occasional attacks of inflammation in the external ear, accompanied by a copious thin discharge from the passage, and temporary deafness. An unusually severe attack of this kind, about ten months before Mr. Earle was consulted, had so far impaired his sense of hearing as obliged him to quit his regiment, for the purpose of obtaining relief. On examination, Mr. Earle found the meatus of either ear much narrowed in its calibre by the thickening of the surrounding parts, especially by the great increased density of the cuticle, which had a white appearance, and was moistened by a thin discharge resembling rennet whey depositing small portions of a curdy-looking substance. On clearing all away, and dilating the meatus, there did not appear any ceruminous secretion, but the same white thickened cuticle was seen to extend as far as the eye could reach. Although the sense of hearing was nearly gone, yet a watch applied to the teeth or forehead was distinctly audible, convincing our author that there was no defect in the auditory nerve. This naturally led Mr. Earle to believe that the deafness resulted from a thickened state of the cuticle reflected over the membrana tympani, or from the deposition of some morbid secretion there. When a probe was passed down, it did not produce the usual sensations in the patient, nor convey the feeling of a healthy state of parts to the surgeon's hand. Mr. Earle now determined on the removal of the whole cuticular lining of the meatus externus. To effect this he had recourse to the nitrate of silver, which he had found beneficial in causing exfoliation of thickened cuticle from the feet, producing what are called corns. A very strong solution was therefore thrown in with a silver syringe, which completely blackened the epidermis of the meatus. In a few days warm water was injected to loosen the exfoliations. They were detached in small portions at first, and subsequently in larger pieces, one of which, from its form, was evidently the reflected layer which covered the membrana tympani. After this, the injection of warm water caused a distressing sensation and loud sound. His hearing from this time was greatly improved, but still rather confused. The other ear was treated in the same way, and with similar success. In a few days the hearing was very nearly restored. From the separation of the cuticle, the treatment consisted in the application of ung. hyd. nit. *3iv.*

cerat. cetacei. ʒiij . ol. olivæ 3j. misce. A little of this was introduced night and morning, on a camel-hair pencil, with the view of stimulating the ceruminous glands to a more healthy secretion. Blisters were also applied behind the ears, and kept open for some time. He rejoined his regiment, and has remained perfectly well.

From the silence of authors respecting cases of this kind, Mr. Earle has been induced to lay the above instance of successful treatment before the Medico-Chirurgical Society, accompanied by a train of very ingenious observations, explanatory of the pathology of the complaint. But, as we are only able to record the fact, we must refer to the volume itself for the reasonings.

Mr. Earle mentions two other cases in this paper, which we deem worthy of notice. The first was a gentleman who applied to our author on account of a deafness of some continuance. On examination, the whole meatus was found choked up with numerous scales, closely impacted together by means of a morbid secretion of cerumen. The patient had been subject, from youth, to attacks of *lepra vulgaris*, which latterly never entirely left him, and, at times, spread over nearly the whole surface of his body. Injections of warm fluids, and the subsequent introduction into the ear of an ointment composed of equal parts of ung. zinci, ung. hydrarg. nitrat. and cerat. cetacei, together with the internal use of decoct. sarsæ and alterative doses of the oxymurias hydragryi, effected a complete cure.

The other case was that of a lady who never, from birth, had any proper ceruminous secretion. Our author found the meatus dry, and the substance deposited thereon exhibiting no character of cerumen. She had two brothers and a sister similarly affected. At times, after exposure to cold, or when in bad health, the secretion was more abundant and thinner. This irritated the passage, and the whole ear presented an erysipelatous redness, accompanied with considerable tumefaction and distressing deafness. The meatus being unnaturally narrowed, Mr. Earle directed a sponge tent to be used for the purpose of dilatation, after the local inflammation had been allayed, and while medicines were administering to improve the general health. By this plan the passage was considerably dilated, and her hearing much improved. She remained well for near a twelvemonth, when she again suffered a severe erysipelatous attack, accompanied by a copious ichorous discharge. After syringing the ears night and morning, and the inflammation had abated, the passage was anointed with the ung. hyd. nit. mitius. She improved rapidly, and remained in a comparatively better state afterward.

These cases, as Mr. Earle justly observes, show the important part which the ceruminous secretion acts in the auditory functions, and prove the necessity of paying great attention to this secretion, and to the state of the integuments lining the meatus externus. They also authorize us to hope that by the application of suitable remedies, many distressing cases of deafness may be palliated, and some permanently relieved.

The thanks of the profession are due to Mr. Earle, who evinces a very laudable zeal in the advancement of surgical science, combined with a liberal and ingenuous tone of conduct and feeling, which is highly prepossessing in this young and rising surgeon.

2. *Meatus Auditorius*.* The following extract we shall introduce in the words of the author :—

“ There is an obstinate and troublesome disease of the ears, for which I have found the mercurial ointment an excellent remedy. I do not recollect to have met with a description of this complaint in any medical or surgical work. It is seated in the meatus auditorius, is attended with a severe and painful itching, a constant beating and ringing in the ears, and, at times, with a thin, acrid discharge, that excoriates and inflames the parts over which it flows. This discharge appears to proceed from a number of small ulcers which are spread over the surface of the meatus, and probably over the tympanum itself. The ulcers will sometimes of themselves heal up, and remain in that state for weeks, or even months, leaving behind no other indication of disease than an occasional itching ; they will then gather, again break out, and continue to discharge for several months to the great annoyance and distress of the patient. During the period of gathering, as it is familiarly termed by the patient, there is an extreme degree of tenderness for some distance round about the meatus externus, which forbids even the slightest touch.

“ I do not know that this complaint has ever terminated in deafness, but in some cases, which have fallen under my observation, the hearing has been considerably impaired. I have known it alternate in one person with a painful heat and itching of the eyes. When in these organs, the ears were entirely free from complaint, and, on the contrary, when the latter were diseased, the former were perfectly well. Before using the ointment, I had been very much baffled in the treatment of this complaint. I had tried blistering behind the ear, and resorted to various stimulating and astringent injections, consisting of sulph. zinci, superacetat plumbi, sulph. cupri, &c. but all to no purpose. The ointment is the only remedy, which I have

* Dr. A. T. Dean, *American Medical Recorder*, July, 1820.

found to have any control over this disease. By means of it, I have succeeded in curing several obstinate cases, which resisted every other mode of treatment. If it does not effectually eradicate the complaint, it will at least suspend, or cure it for a time." 306.

Dr. Dean thinks that this is a much less formidable affection than the "puriform discharge from the ears," which Mr. Curtis of London treats successfully with the *argentum nitratum*. The latter affection Dr. Dean has often succeeded in curing by repeated blistering, and a perseverance in the use of astringent injection.

3. *Congenital Division of the Palate.** Deformities of this kind, especially when they impede such important functions as those of speech and deglutition, are very serious misfortunes, and are generally very difficult to remedy or remove. Mr. Alcock's ingenuity was happily exerted in the following case, for the details and drawing of which his surgical brethren must feel much indebted to him. Mr. Alcock engraved the plate, as well as sketched the representation which we have obtained permission to republish from the April No. of the Medical Intelligencer.

"The patient, a youth under 12 years of age, had laboured under the inconveniences of the malformation from the time of birth. Not only were the uvula and the soft palate divided, but the palatal portion of the upper maxillary bone, and also of the *ossa palati*, were so deficient, that there was a free communication between the floor of the nostril and the roof of the mouth. The fissure extended to within $\frac{3}{4}$ ths of an inch of the upper incisor teeth. The consequence of this malformation was, that the voice was so inarticulate as to be nearly unintelligible to those unaccustomed to his manner of speaking. The secretion from the nostrils drained down into the mouth, and his swallowing, unless performed with great caution, would often seem to threaten suffocation, the food or drink being forced upwards into the nostrils. As a child he had been unable to suck. This will not appear extraordinary when we consider that the soft palate acts like a valve in preventing what we swallow from passing into the nose.

"The patient had undergone the operation for hair-lip during infancy; but no attempt had been made to remedy the greater evil.

"From habit, the patient was but little sensible of his defect in speech; it was the inconveniences above stated that induced him to wish something to be done to relieve him of them. Even his near

* On Congenital Division of the Palate. By T. Alcock, Esq. Surgeon. Fecundily, with a plate. (Med. Intelligencer, No. 6.) See plate in front of this number.



1820.] *Alcock on the Congenital Division of the Palate.* 457

relations had become so used to his nasal tones as not to be anxious on that account ; and if any one imitated him he would exclaim, with great emphasis, and a nasal sound which defies expression by letters, " I oont eek oo !" (I don't speak so.)

" It was stated to his relations, that if the back part of the divided portions could be united, that an artificial palate might then be made to fit the firm edges of the opening, and thereby wholly obviate the inconveniences under which he laboured. The latter part was that first attempted. I may here beg leave to notice, that the principle of supplying an artificial palate has been long admitted ; but I am not aware of any work wherein the detail is so stated as to enable the apparatus to be constructed with sufficient accuracy ; and unless it be accurate, the patient will soon discard it.

" The annexed sketch will convey some idea of the parts. The head was turned back, the mouth fully opened, and the tongue pressed down. See plate 2, fig. 1.

- A. The cleft in the palate, opening into, or communicating with the nostrils, thereby making the mouth and nostril one common opening.
- B. B. Part of the uvula, a portion being on each side of the cleft.
- C. The amygdalæ, or tonsils.
- D. The tongue pressed down.
- E. The teeth, in outline.

The dotted lines represent the space covered by the artificial palate.

" The means I used on this occasion were similar to those employed by Dentists, in adjusting artificial teeth. I took a piece of plastic wax, and having given it somewhat the necessary form, I pressed it firmly upon the palate, so that the wax was pressed into the hollows, and received the impression of the eminences of the parts to which it was applied. This being carefully removed, was allowed to become hard, after which a cast was made from it in plaster of Paris. This cast fitting the wax model, as the model itself fitted the palate, gave an exact fac-simile of the form of the living parts ; and to this was the artificial palate made perfectly to correspond, so that the adaptation was complete. To support this plate an upright slip was affixed, the upper part of which was covered with soft sponge. This readily passed through the fissure, and the sponge resting on the floor of the nostril, kept the apparatus steadily in its place. Care was taken that the sponge should not press on the edges, lest the aperture should be enlarged.

" Fig. 2, shows a section of the palate-plate to exhibit the manner of supporting the apparatus in situ. A duplicate should be provided to admit of cleanliness, as the sponge becomes saturated with the secretion from the nostrils in a few hours. Fig. 3, a side view. The dots represent holes to allow of the sponge being secured.

The voice was much improved, and his swallowing performed with greater facility. So satisfied were the boy and his parents with the relief which he experienced, that they declined the use of any further means to render it more complete. . THOS. ALCOCK.

3, Piccadilly, April, 1820."

§ II. CHEST.

4. *Disease of the Heart, &c.** There is probably not a more interesting or instructive case of complicated disease, of several important organs on record, than the following history presents; and therefore we shall give a very full analysis of it.

On the 25th September, 1818, M. Gogiran was called, in conjunction with M. Naudin, a distinguished surgeon of Toulouse, to Mademoiselle Fani, 30 years of age, the principal figurante of the Toulouse theatre. For six weeks previously, the following symptoms had gradually increased to their present state.

"*First visit* :—Countenance flushed, lips livid red, inability to lie down, breathing short and interrupted, pulsations of the heart very strong, and both visible and audible; pulsation of the large arteries, especially of the coeliac and its branches; the pulse at the wrist precipitous, irregular, and obscure; the abdomen painful, particularly in the right hypochondrium; urine lateritious; acute, and almost insupportable pain in the right shoulder; sleep short and interrupted; great emaciation; dull sound of the chest, on percussion, especially about the cardiac region." 343.

Who would not have considered the above symptoms as clearly indicative of hypertrophy, or active enlargement of the heart? This was the opinion of Gogiran, and also of Naudin, who had been a month previously in attendance; the supposition being strengthened by a consideration of the patient's mode of life, which subjected her to violent muscular exertions—a common cause of cardiac aneurisms.

The menses having been stopped for two months, a dozen of leeches to the pudendum, and the most rigid regimen enjoined.

29th. A slight diminution of the violent action of the heart, the other symptoms remaining stationary; but on the 2d October, there was an increase of the cardiac action, with excessive pain in the shoulder, to which a tartar emetic plaster was applied.

5th October. Oedema of the feet and ankles, enlargement of the abdomen, increase of tenderness in the region of the liver, with much oppression. On the 9th, these symptoms still augmenting, pills, composed of the saffron of steel, calomel, and digitalis, were prescribed. 20th. There is manifest fluctuation of water in the abdomen, with great restlessness, oppression, paucity of urine, and derangement of the *animal* functions. Nitre, and tincture of digitalis, were now added to a diuretic beverage. 30th. Considerable amendment has taken place. The urine is more copious; the circulation

* Observation d'une maladie du cœur, suivie d'obstruction au foie, d'hydropisie ascite, et d'un état convulsif de l'estomac. Par M. M. Gogiran et St. André, docteurs en médecine, à Toulouse. [Société de Médecine de Paris. séance du 17 Aout, 1817.]



more free ; the action of the heart and arteries less strong and distinct ; the pulse more developed and regular.

By the 4th of November the dropsical symptoms had nearly disappeared, and the rhythm of the heart had become nearly natural. But now, an enlargement of the liver (*engorgement du foie*) was evident. An irritating plaster was applied to the hepatic region, and the *digitalis* was increased.

Throughout the month of November there was a daily amendment, with excellent appetite and perfect digestion. All appearance of ascites and œdema had vanished ; and the engorgement of the liver was somewhat reduced. In December, the action of the heart continued nearly natural—the sleep was sound, and the urinary secretion healthy. The patient could get up, and walk about her chamber ; in short, throughout this month the health of the patient continued to improve daily.

Early in January, there were some symptoms of relapse ; but by the end of the month, the patient was convalescent—went out—took exercise, and at length appeared in perfect health. Medical attendance was, of course, discontinued.

After two months of restored health, the symptoms began gradually to return, accompanied, this time, by distressing nausea and vomiting.

On the 20th April, M. Gogiran was called to the patient, and found the dyspnœa very great, with sleeplessness, violent action of the heart, particularly conspicuous in the epigastric region. The abdomen was now rapidly filling with water, ascites and hepatitis being very evidently declared. The *digitalis*, with aperients and narcotics, were again had recourse to. By the end of the month, the constant vomiting, the emaciation, and the cardiac disorder, had reduced the sufferer to a very low ebb. At this time, M. Gogiran being called away, she was delivered over to the care of M. Saint André, who noted the following symptoms.

“ Considerable effusion in the abdomen, violent pulsation of the heart, as though it was aneurismal, right hypochondrium distended by the enlargement of the liver, the convulsive vomitings were so frequent, that they seemed to be only interrupted by alarming fits of syncope, inability to keep the least nourishment on the stomach, interrupted sleep, extreme dyspnœa, inability to lie down—emaciation to the last degree.”

Opiates and antispasmodics were prescribed, with some other trifling remedies, and asses' milk. 6th April. The milk seems to stay a little on her stomach ; but this amendment was of short duration, and the vomiting, with all the other bad symptoms, were, if possible, aggravated, although she took eight grains of opium daily. Ice was now applied to the pit of the stomach. In four days, this remedy completely arrested the vomiting. She began to take nourishment, and the functions became more regular. The oppression from the ascites was, however, very distressing. Afraid of renewing the gastric irritability, M. Saint André exhibited the tincture of *digitalis* by

clyster, and by frictions on the skin of the lower extremities. In a few days the urine was considerably increased, without any irritability of stomach being induced; the size of the abdomen diminished, and by the 6th May the water was entirely evacuated, the enlargement of the liver becoming proportionally more conspicuous. The dyspnoea, and the violent action of the heart subsided gradually, and the patient was soon able to take exercise. The frictions of the digitalis were continued, to which was added, mercurial friction over the region of the liver. By these means, the swelling of the right hypochondrium was reduced, and finally dissipated. In the month of June, the patient left off medicine, and undertook a journey to Paris, where, at the end of three months, she was seen in good health, with the exception of slight occasional irregularities of the circulation, at long intervals.

Messieurs Bouvier and Legumeau have made some interesting remarks on the above case, a few of which we shall notice here.

They consider, and we think justly, that the cardiac symptoms above enumerated, are to be attributed to *inflammation* of the heart, or pericardium, or of both at the same time. It is true, that *pain* in the region of the heart was not complained of; but every practitioner is aware, that inflammatory action often goes on to a great extent in an *internal* organ without the *pain* being sensible. The heart and pericardium have been found glued together by adhesive inflammation, in patients who have never complained of pain in that region during their lives. There is every reason to believe, that a certain degree of hydrothorax, or hydropericardium existed at certain stages of the foregoing malady. Indeed, on the 15th October, the chest, on percussion, gave strong evidence of watery effusion, although, on an examination some days previously, there were no such phenomena discoverable.

That HEPATITIS was complicated with the thoracic affection, in the above case, no man can doubt. The obstruction, or engorgement, however, does not appear to have involved any serious alteration of structure, but rather, a general distention of all the vessels of the organ, vascular, lymphatic, and excretory, which is remediable, and that sometimes very speedily, by the proper means. Whether the hepatic and cardiac affections, in this case, stood in the light of cause and effect to each other, and which was the original one, it would be desirable to ascertain. We know that both functional and organic diseases of the heart, will sometimes produce engorgement of the liver; and that congestions and enlargements of the liver will, on the other hand, embarrass the function, and sometimes impair the structure of the organ of circulation. In the case just related, we think the disorder of the liver preceded, and probably caused, that of the heart; and this is the opinion of the reporters on the case. There can be little doubt, also, but that the palpitation and violent action of the heart, in the relapse particularly, were *nervous*, or symptomatic of the disorder in the liver, and not resulting from any serious organic lesion. They therefore lay open to us an important lesson and caution, relative to the difficulty of distinguishing functional.

from structural derangements of the heart, and show us how guarded we should be in our prognoses in this class of human afflictions.*

In respect to the treatment, it was any thing but energetic, and this is acknowledged by the editors themselves. Neither the general nor local bleedings were carried to a proper extent. The disease of the liver was not treated with decision ; and, upon the whole, we conceive, that the natural powers of the constitution did more to restore this lady to health, than the prescriptions of her physicians. The effect of the ice, in stopping the extreme gastric irritability, is worthy of being borne in mind. We are also of opinion, that this lady will again relapse, sooner or later, if she does not embrace a very different kind of life from that in which her physicians found her.

5. *Cardi-hepatic Disease.** A weaver, 32 years of age, addicted to considerable intemperance, who had enjoyed good health till within three years past, complained to Dr. G. of great pain and oppression in the hypochondriac and epigastric regions, somewhat relieved by sitting in the horizontal position. No pain in either shoulder. An unusual and strong pulsation in the left hypochondrium, corresponding with that of the heart and arteries, which is 120 in the minute. Respiration rather hurried and oppressed, countenance pale, or rather somewhat livid, expression anxious, conjunctiva whiter than natural, tongue white and moist, bowels torpid. This was the 18th October, 1819. He was bled to 28 ounces, with temporary relief. A purgative of calomel and jalap, which brought off much lumpy fæces. On being carefully examined, while lying in bed, a tense and hard tumefaction was discovered in the epigastric and hypochondriac regions, which, on the slightest pressure, gave pain. The calomel and jalap were ordered to be repeated on several successive mornings, alternated with saline purgatives. He would not allow a blister or seton ; was enjoined strict temperance.

Not much amendment being perceptible, a course of mercury, in the forms of pills and ointment, was prescribed on the 1st November, with a little more nourishing diet. From the 8th till the 20th, a profuse ptyalism took place, which exhausted the strength much, and was attended with œdematous swellings, dyspnœa, scanty urine and stools, insomnium, and other unpleasant symptoms.

Diuretics diminished the œdema ; but the pulsation in the left hypochondrium continues great. The report on the 15th December, states, great fulness and tension in the hypochondria, and also in the line of the arch of the colon ; breathing laborious, pulse irregular, with considerable convulsions. After rallying and falling back alternately, he died suddenly on 7th January, 1820, after a too hearty meal of animal food.

* Dr. Gardiner, Ed. *Journal*, No. 65.

Dissection. Some effusion in the abdomen: Liver much enlarged and rather hard—the left lobe proportionally more enlarged than the right. The organ weighed 5½lbs. Dutch, but the nature of the morbid growth not appreciable by the naked eye. Spleen enlarged and much indurated. No other disease in the abdominal viscera.

Thorax. Some effusion. Heart enlarged in all its parietes and cavities, resembling the heart of an ox, weighing 48 ounces.

This is a case of “active aneurism” of the heart, according to Corvisart, and “dilatation with hypertrophia,” according to Laennec, complicated with enlargement of the liver. Dr. Gardiner does not appear to be acquainted with Laennec’s work on the subject, and to it therefore we refer him for information, which will a little surprise him.

6. *Wounds of the Chest, and Empyema.** Penetrating wounds of the chest and abdomen, where are situated those great organs on which life immediately depends, have always inspired horror, and must always excite a lively interest, both as to their proximate and ulterior consequences. Few, or rather none, have ever had such a wide range of experience, in military surgery, as Baron Larrey. He has witnessed the carnage of almost every battle that has been fought during the revolutionary war, between the Pyramids of Egypt and the towers of Moscow. Any observations, therefore, from such an authority, are entitled to our undivided attention, and ought to be thankfully received by the profession at large. The paper under review is a very interesting one, and on a very important subject. We shall, consequently, exhibit a very minute analysis of its contents.

In the expedition to Egypt, anno 1803, Baron Larrey experienced the good effects of quickly closing wounds of the thorax, and carefully excluding atmospheric air from that cavity. Since that period he has had numerous opportunities of verifying the statements then made.

“The extravasation of fluids,” says the Baron, “in the thoracic cavities, is much less dangerous than has been imagined. In fact, if it be not very considerable, it is soon isolated by a circumscribed cyst, the vessels (venous) of whose parietes either drink up ultimately the effused fluid, or suppuration ensues and gives vent to the matter, if not evacuated by an operation. The parietes of these cysts afterward coalesce, and the patient is cured.

* Observation sur une plaie d’arme blanche à la poitrine, suivie de réflexions sur les effets de l’opération de l’empyème, que cette blessure a nécessitée, et de plusieurs autres observations remarquables sur des plaies analogues; par M. le Baron Larrey. [Journal Complémentaire des Sciences Médicales. Mai, 1820.]

"But if the extravasation be great, Nature is unable to effect the process above described, and sinks in the effort—especially if the membranes surrounding the fluid lose their vital powers by the mechanical pressure of the blood on their surfaces, or perhaps from the deleterious effects of the blood itself on the extremities of the capillary vessels. The extravasated mass, remaining then stagnant, is augmented by the serous and purulent secretions of the pleura, now in a degree of inflammation. Under such circumstances, unless art interfere, and open a passage for these fluids, death will ensue from the impeded function of the lungs, and the patient will be carried off by suffocation. Here then the operation for empyema becomes indispensable, in the sequel of wounds penetrating the thoracic cavities, as the sole mean of warding off a fatal issue." 195.

Having performed this operation with success in numerous instances, Baron Larrey considers himself authorized to say, that it is by no means dangerous, if properly performed. The great object, or rather difficulty, is to know, 1^{mo} *when* the extravasation is such as cannot be absorbed; and, 2^{do}. *what* is the proper period for performing the operation? Without pretending to solve these questions completely, our author offers the following sketch of his reflections on the subject.

"1 In what case is the operation for empyema indispensable, where wounds have penetrated the chest? It is (as before observed) where the sanguineous extravasation is too great for absorption, which circumstance must be ascertained by the lapse of time since the infliction of the wound, (generally about nine days) and by the progress and intensity of the symptoms usually indicative of such effusion.

"Thus in a penetrating wound of the chest, if any of the large vessels are opened, and one side of the thorax filled with effused blood, the operation becomes indispensable, particularly if the wound be situated at an elevated point of the chest. The symptoms denoting this extravasation will be oppression, difficulty of breathing, immobility of the ribs below the wound. To the pain which the patient feels when the surgeon presses his finger between two ribs, will be added a sense of undulation over the finger of the latter. The patient will not be able to lie down on the side opposite the extravasation, the motion of which will often be sensibly felt by the patient himself, or heard by the bystander.* Percussion too, though often equivocal, will sometimes assist us. Finally, this effusion is characterized by an œdematous ecchymosis behind the hypochondrium of the side affected. This our author considers as a pathognomonic

* "This phenomenon was very distinct in the case of a grenadier affected with hydrothorax in the right side of the chest. When he lay down on his back he could undulate the fluid in such a manner that it was distinctly audible at some distance. A seton, and several applications of moxa induced an entire resorption of the effused fluid. The parietes of the cavity gradually coalesced, and the soldier, who was presented to the Society of Medicine, was completely cured." 196.

sign, never having known it absent :—all the others are, more or less, equivocal.

“2nd. At what period should the operation be performed, supposing it to be indispensable ?

“It would be unsafe to perform the operation too early, because it might lead to fresh hæmorrhage, and disturb Nature in her attempt at resorption. We should be pretty certain that the divided vessels are consolidated, and that the effects of the fluid's pressure on the internal organs and linings of the thorax are developed. These effects do not generally manifest themselves, in such a manner as to be distinguished from the *primary* effects of the accident, till between the fifth and ninth day. Probably the operation will seldom be necessary before the seventh, or successful after the eleventh or fifteenth day.” 197.

The following case is peculiarly interesting, especially as it discloses to our view what is not very likely to be often seen, death having unexpectedly taken place at the very moment when the man might be considered as almost cured.

Case. 1. Louis D***, 22 years of age, a grenadier in the second regiment of royal guard cavalry, of athletic constitution, irritable and headstrong, received, in a duel, on the 7th September, 1818, at five o'clock in the morning, a wound by a cavalry sword, which went right through the upper and left side of the chest. His adversary experienced much difficulty in withdrawing his weapon. A terrible hæmorrhage followed ; yet Louis fell not, but actually walked unassisted to a house, near the place of combat, whence, his wounds being bound up, he was immediately conveyed to the military hospital of Gros-Caillou. Here Baron Larrey found the patient, with scarce a symptom of life, from the vast loss of blood. Having stripped and chafed him with warm diluted vinegar, the dressings were removed, but with great caution, so as not to permit the air to pass into the chest. The instrument had entered between the first and second rib on the left side, and came out between the superior posterior angle of the scapula and the third dorsal vertebra. The edges of both wounds, and also the neighbouring parts, were tumefied and emphysematous, in consequence of the external mouths of both wounds not being parallel with the wounds of their corresponding intercostal muscles, and also from the awkward application of the bandages. Nevertheless, whenever pressure was taken off the wounds, the blood flowed in jets from them, followed by symptoms of suffocation and approaching death. Baron Larrey concluded that the weapon had, in its passage across the chest, divided the internal mammary artery in front, the intercostal artery behind, piercing the superior lobe of the lung, and grazing over the arch of the aorta.

Our author's first object was to restore the parallelism of the wounds, by cutting some bands (brides) or shreds that kept their external and internal orifices in a contrary position. The lips of the wounds were then carefully brought together, and retained so by adhesive straps and bandages. Chicken broth with nitrous emulsion only for nourishment.



Cupping glasses with scarifications round the wounds soon removed the emphysematous swellings, and the hand of death seemed arrested, at least for the present. Frictions with warm camphorated and stimulating oils were applied over the body—the patient expressed himself as better—the breathing became less laborious—the pulse and heat more developed—the lips resumed their natural colour—and in a few hours every symptom announced a cessation of the internal hæmorrhage.

In the same evening a febrile irritation ushered in a degree of reaction. The patient was therefore immediately bled, and cupping glasses were applied to all the left side of the chest. The dressings were not moved, and the night was passed calmly.

Next morning the pulse was found sharp and quick, with morbid heat of skin, redness of the cheeks, acute pains in the region of the wound, spitting of black blood, in considerable quantities. Venesection was repeated, diluent anodyne emulsions for drink, and laxative clysters exhibited.

“The third day, and during the night, the posterior wound opened, and an effusion of black blood took place. This was renewed on removing the dressings. This discharge of blood, far from soothing the patient, exasperated the nervous symptoms, and the unfortunate soldier all but perished among our hands, this time.”

Both wounds were again secured, as well as possible—the patient was placed gently on a fresh bed—and the frictions again renewed over the surface, to elicit the circulation of the blood. From this till the 7th day the patient remained calm and comfortable, some blood escaping, from time to time, but without any air gaining access to the thoracic cavity.

On the night of the 7th day, the patient began to exhibit an extreme restlessness, without being able to enjoy a moment's repose. On the 8th day the pulse was quick and contracted; yet there was not much oppression; the respiration was not laborious; and the patient did not complain of any pain. Nevertheless an attentive examination of the chest, and of the patient's state altogether convinced Baron Larrey that there was effusion in the left cavity of the thorax, and he determined, in his own mind, to operate for empyema the next morning, if the symptoms continued the same.

The ninth day was that of clinical lecture. The patient was the subject of it, and several foreign surgeons were present, who, having examined the chest minutely, could not be convinced that there was any effusion, and did not approve of the operation. But the Baron was firm in his opinion, and the never-failing pathognomonic symptom of ecchymosis with œdema in the posterior region of the hypochondrium, being evident, he determined to operate in the presence of them all.

Every thing being ready, a spot was chosen, in the most dependent point of the affected cavity—“point le plus reculé et le plus déclive de la cavité malade,” with the precaution not to have the wound of the integuments and that of the intercostal muscles in a parallel direction.—“Avec la precaution de ne point laisser de rap-

port entre la division des tugumens et celle des muscles intercostaux." Arrived at the second bed of the intercostal muscles, the Baron ordered a large vessel to be placed at the patient's side ; he then divided the internal layer, and enlarged the wound with a button-pointed bistoury. In a few seconds the vessel, which ~~was~~ about five pints, was overflowing with a grumous liquor, resembling, in colour, the lees of wine.

A tent was introduced, to prevent the closing of the wound, and dressings were applied, having apertures for any discharge that might flow. The patient was placed in a fresh bed, and expressed himself as progressively relieved from the moment the effusion began to issue from the wound. At the close of the operation, the pulse became developed, and all the functions resumed their natural action. He fell into a refreshing sleep of some hours. Bouilli, a little claret, and some pectoral ptisan were allowed. Next morning, after the operation, the dressings were found moistened with the same kind of discharge which was drawn off the preceding day, and which continued to flow pretty copiously. About the ninth day the discharge appeared purulent, and without any smell, after which it gradually diminished in quantity. The wounds by the sword healed slowly, especially the anterior one.

During the first month the patient manifested occasionally some febrile movements in the system, with gastric and nervous affections, for which were prescribed gentle vomits, cold infusions of bark, and light bitters. But a certain degree of emaciation followed these attacks, attended by some peculiar phenomena which are worth relating.

1^{mo}. The beating of the heart, which had disappeared from its usual place when the effusion occurred, first reappeared at the left side of the sternum, and gradually moved its place till it resumed its original place of manifestation. From thence it gradually receded backwards and inwards till it became scarcely perceptible, at the epoch when the patient might be considered as almost cured.

2^{mo}. The pulsations of the radials in the two arms presented a striking difference. Those, for instance, of the left arm were distinct, regular, and uniform ; those of the right arm were confused by a kind of second, or intervening demi-pulsation, presenting a character of undulation and retrograde locomotion.

3^{mo}. The veins of the left arm were not apparent, while those of the right continued turgid and prominent during the first 25 or 30 days after the wound was inflicted. Ultimately, however, the pulse became synchronous and uniform in both arms, except that it remained a little weaker in the left than in the right side. These are curious phenomena for the physiologist to solve. The solution which Baron Larrey offers, does not appear very satisfactory, or even intelligible to us. As it is only a short passage, however, we shall give it in his own words.

" Il serait bien difficile de résoudre un tel problème ; cependant ne pourrait-on pas croire que, par l'obliteration presque totale du poumon gauche, le sang destiné à son artère principale, obligé de



rétrograder vers le ventricule droit, formait un obstacle au passage de celui contenu dans l'oreillette qui lui est contiguë ; et de proche en proche, celui des veines qui s'y rendent, et surtout de celles qui parcourent le membre abdominal droit et le restant de la moitié droite du corps, pouvait rétrograder par une sorte de regorgement, jusqu'aux capillaires artériels, et déterminer ainsi dans les artères du bras un léger mouvement antipéristaltique, lequel pouvait agir, alternativement, avec celui (péristaltique) déterminé par la contraction directe et excentrique de ces mêmes artères ?" *Journal Complémentaire, Mai, 1820. P. 203.*

Having passed the 40th day, the patient *felt himself get better and better*. The pus which came out of the wound was healthy and in small quantity—and the sword wounds were now perfectly cicatrized. The side of the chest affected assumed a size, position, and proportion below that of the healthy one. The left nipple descended an inch beneath the level of the right, the shoulder was depressed in a corresponding ratio, and the intercostal spaces on the left side were considerably reduced. The right side of the chest was enlarged in the same proportion.

Arrived at the 100th day from the operation, the patient ate light food, and walked several hours daily in the wards of the hospital, without any assistance. In short, at the end of four months there was every prospect of speedy and perfect re-establishment of health. But this soldier, who was of a proud, fiery, and irascible disposition, became tired of the ennui of an hospital and its abstemious regime, delivered himself up to every excess which came within his power, especially the abuse of spirituous liquors, which he clandestinely procured, and which produced in him so much irritation and excitement that a violent inflammation of the heart and its envelopes was kindled up, and death ensued in 48 hours from the commencement of the disease. As the patient presented some symptoms during this carditis which are seldom enumerated by authors, we here transcribe them.

"The patient experienced a compressive and constant pain in the præcordial region, with a sensation of burning heat, and inextinguishable thirst. He threw himself, every minute, into violent paroxysms of anger—manifested a constant wish for death, and attempted suicide. He experienced severe cramps in the legs and feet ; with icy chills running over his limbs. The pulse at the wrists was hard and contracted ; but the action of the heart against the parietes of the chest was like the stroke of a ball of metal equal in size to the heart. The pupils were extremely sensible to the light. In fact this wretched man expired in a transport of rage, and uttering all sorts of imprecations, on the 11th January, 1819, one hundred and twenty-five days after he had received the wound through the chest.

Dissection. The capacity of the left thoracic cavity was reduced one-third. The heart and pericardium occupied the greater part of

the left side of the chest; the portion of lung which escaped compression, during the empyema, was hepatized, and connected by false membranes with the heart and pericardium—the two last being also intimately adherent. The diaphragm, on this side, was much arched, and helped to fill the space left by the fluid drawn off by operation. The ribs were thickened, and their interspaces shrunk in. A small quantity of matter was found in a little conical cyst, at the most depending part of the thorax, and communicating with the wound made in the operation, which continued fistulous. The two original wounds were completely healed; and on minutely tracing the course of the sword, from front to rear, the suppositions respecting the vessels and parts wounded were verified. The case altogether proves the perfect safety and success of the operation for empyema even under the most unfavourable circumstances.

The following cases present examples of wounds penetrating the cavity of the chest, and accompanied by effusion, which being absorbed, a perfect recovery took place.

Case II. A cavalry soldier, 21 years of age, of strong constitution, and quiet character, was brought to the military hospital of Gros-Caillou, early in February, 1819, in consequence of a severe wound of the chest which he had received in a duel a few hours previously. The cavalry sword had penetrated about three inches into the right thoracic cavity, entering between the fourth and fifth rib, a little behind the right nipple. Although he was speedily conveyed to the hospital, and immediately attended by Baron Larrey, yet the loss of blood had been great, and he was in an alarming state of prostration, blood of a vermilion colour, and frothy, still issuing from the wound in considerable quantities. The surrounding parts were tumefied and emphysematous. The patient was spitting up blood, his respiration laborious, the oppression extreme—in short, he appeared at the point of death. The Baron hastened to restore the parallelism of the wound, by dividing all bands of integuments that might obstruct the discharge of air or blood extravasated in the cellular membrane. Cupping glasses, exhausted of air, were then applied over the wound, after which the edges were carefully brought together, and secured by adhesive plaster and proper bandages.

The symptoms were now arrested, as by a charm, and the patient revived from the brink of death. The pulse, heat, sensibility, all gradually returned, and in a few hours every thing announced the cessation of the internal hæmorrhage. But the presence of an effused fluid in the cavity of the chest soon induced symptoms of irritation, inflammation, and compression, with difficulty of breathing, and immobility of the ribs of the right side. The patient lay on his back, or on the side affected; and, finally, a slight ecchymosis manifested itself, on the 3d day, in the posterior part of the right hypochondrium.

The patient was now bled, and enjoined cold mucilaginous drinks, while cupping glasses with scarifications were applied all over the right side of the chest. These means arrested the progress of the



inflammation, but the symptoms of effusion continued. The wound was kept carefully closed, and the means above-mentioned were persisted in. On the fifth day, there was little hope of resorption of the fluid effused, and it was determined to operate for empyema on the 7th, unless the symptoms meliorated before that time.

In the night of the sixth day, however, after a violent attack of fever, a copious and fetid perspiration broke out, which proved critical; for, from that time, the symptoms of thoracic effusion diminished, and finally disappeared. The external ecchymosis also began to recede from the time of this perspiration, and gradually, though slowly, vanished—a proof to our author that the internal effusion was absorbed, *pari passu*. To aid this absorption, numerous flying blisters were applied to the affected side, and five cylinders of moxa. All the functions became gradually re-established, and this young soldier was discharged from the hospital, in good health, at the expiration of three months from the time of his entrance.

Several other soldiers, belonging to the guards, who had received similar wounds, and in whom the evidences of thoracic effusion were equally strong as in the foregoing case, were treated in a similar manner, and recovered without the necessity for an operation.

Case III. A sergeant of the Swiss guards, named Placide C—, 21 years of age, of athletic constitution, was carried to the Military Hospital of Gros-Caillou, on the 23d of April, 1819, having received in a duel, a sword-thrust in his chest. Baron Larrey was speedily on the spot, and found the soldier almost lifeless. The dressings were torn off, and two wounds appeared; one behind, between the inferior angle of the scapula and the spine, in the interval between the fifth and sixth rib:—the other wound, of a much smaller size, was near the left nipple. The sword, which was more than an inch in breadth, in the middle, had entered at the posterior wound, and emerged from the anterior. Our author concluded, from the direction which the sword had taken, that it must have pierced the pericardium near its adhesion to the diaphragm, though without wounding the heart itself.

“In paroxysms of rage,” says Baron Larrey, “and in all violent passions of the mind, the function of absorption appears to be suspended, and consequently an accumulation of fluids obtains at these times in the serous cavities. Thus it is possible and probable that the liquor pericardii had accumulated in the pericardium during the rage of this combat. Acute hydrocele affords proof of the above reasonings, and the phenomena which we shall state farther on, confirms the truth of it.” 209.

The space between the two wounds was found gorged and emphysematous. The introduction of a sound into the anterior wound, although with the greatest degree of gentleness, caused a sensation of anguish and suffering, yet without distinct pain.* Both wounds

* This was most probably from coming in contact with the heart. *Rev.*
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were cleared of all cross bands, cupping-glasses were applied over and around them ; and then they were closed and carefully secured from the external air. The hæmorrhage appeared at length to cease—the patient began gradually to revive, and the vital functions finally became developed.

Evening.—The symptoms of great turgescence and irritation, with spitting of blood, having been manifested, the patient was bled, and two laxative clysters were thrown up.

April 24th. This morning the patient complains of great pain in the course of the anterior wound, with oppression, restlessness, flushings of the face, quick pulse, ardent thirst, and nervousness. All the dressings, except the adhesive straps, were removed from the anterior wound, and a poultice was applied, while blood was taken by cupping from the hypochondrium and lower belly. A large bleeding from the arm was also employed, with plenty of diluents, icy-cold. The patient became somewhat more calm ; but he was in imminent danger, and no one could entertain hopes of saving his life. The surgeon-major of the regiment, Dr. Hedellofer, announced to the colonel of the regiment, that the case was lost, as the heart or pericardium had been wounded.

25th. On the night of the 25th, a severe paroxysm of fever occurred, during which the surgeon in attendance bled him largely, and soon after a profuse perspiration broke out, and was succeeded by a calm.

28th. The dressings were completely removed. From the posterior wound the discharge was very trifling ; but from the anterior one, a large quantity of an albuminous fluid issued spontaneously, followed by a shrinking of that side of the chest, and an increase of freedom in the respiratory function, and a return of the cardiac pulsations against the ribs, the disappearance of which, for some days, Baron Larrey naturally attributes to the presence of a fluid accumulated between the heart and the anterior parietes of the chest. All the other symptoms of thoracic effusion now gradually disappeared ; but this time the patient complained of a violent pain stretching from the posterior wound to the top of the corresponding shoulder, owing probably to the lesion of some branches of the spinal nerves. This pain was removed by cupping and warm anodyne embrocations.

From this period till the 4th May the patient continued to improve ; but now again some symptoms arose indicative of a fresh collection in the præcordial region. The cautious introduction of the sound through the anterior wound, gave vent to half a palletful of sero-purulent fluid. The cardiac pulsations which had again disappeared, were now, once more, renewed, and the freedom of the respiratory function re-established. The discharge from the anterior wound became more purulent, and of a better quality, as well as diminished quantity ; and, to the surprise of all the medical attendants, this young soldier completely recovered in 41 days from the infliction of the wound. At present (20th March, 1820) this man enjoys good health. The left arm is smaller and weaker than the



right—the wounded side of the chest is somewhat shrunk, and the left nipple about an inch lower than that of the other side. The cardiac pulsation is bounded to a spot immediately beneath the cicatrix of the anterior wound, as if the organ was attached by its pericardium to the bottom of the original wound.

Case iv. A voltigeur, in the 6th regiment of guards, about 23 years of age, was carried to the hospital of Gros-Caillou, on the evening of the 30th September, 1819, severely wounded by a sword in the chest, during a duel, a few hours previously. The extreme exhaustion and danger, in which the wounded man seemed, induced the surgeon on duty to allow the rude dressings to remain on the wound. Perceiving no external hæmorrhage, he endeavoured to restore the vital spark which appeared nearly extinct.

Next morning, at Baron Larrey's visit, the patient was examined, and a wound an inch in diameter, was found under the right nipple, penetrating in a direction inwards and backwards, giving vent to vermilion-coloured and frothy blood, which was also thrown up by the mouth. The face was pale, the breathing short, oppressed, and laborious; the lips were white, the pulse gone, the extremities cold, the speech scarcely audible—in short, the patient appeared in articulo mortis. The sabre had penetrated into the chest to about the depth of two inches, dividing the cartilage of the third rib, near its junction with the osseous portion of the same. The two anterior branches of the intercostal artery were wounded, the superior lobe of the lung entered, and doubtless the phrenic nerve pricked, in its passage on the surface of the mediastinum. This was deemed to be the case from the depth and direction of the wound, and the nervous symptom which occurred, as soon as the vital forces returned, to wit, the pain, convulsive laughter, and subsequent severe neuralgia of the right arm.

Having cleared the wound of all cross-bands, and established its parallelism, a great quantity of crimson and frothy blood issued forth, and the patient appeared on the verge of death. They hastened therefore to close the wound, and keep its edges together by adhesive straps and bandages. In a few minutes, the pulse became perceptible, and all the vital functions were gradually re-established. Directions were left with the surgeon on duty to keep the patient on the most rigid regimen—to exhibit lavements—and to bleed whenever reaction set in. In the evening, blood-letting from the arm was copiously performed, followed by cupping-glasses to the side, but without removing the dressings. The patient was kept in perfect quietude, with the head elevated.

The nervous phenomena, resulting from the supposed lesion of the phrenic nerve, continued obstinately, and the power of speech did not return for a long time. The pain in the arm and fingers was exceedingly acute, to which were soon added symptoms indicative of effusion in the chest, together with inflammation. Blood-letting was frequently repeated, and also the application of cupping-glasses. The wound was not opened till the fifth day, and then

with great caution not to permit the entry of air into the thoracic cavity. By the ninth day the patient found himself much better. He could now speak a little, and the risus sardonicus began to diminish. Every thing announced that the work of absorption was going forward. Between the 11th and 13th day, however, traumatic fever rose, but was quelled by a blister to the side, and pretty large doses of calomel and opium. After this the patient went on favourably to convalescence. In two months, the wound was healed, the absorption of effused fluid far advanced, and that side of the chest evidently shrinking in. He soon recovered and was discharged from the hospital.

The minute analysis which we have given of Baron Larrey's paper renders all remarks from us unnecessary; as our surgical readers can form their own opinions, without any observations from us. We think, however, that the English surgeon will be gratified and instructed by the perusal of this interesting document from the pen of his able continental brother officer.

7. *Thoracic Affections.** In acute diseases of the thoracic organs it is often highly desirable to establish a counter irritation on the skin, by a shorter process than blistering with the lytta—while, in chronic affections, a more permanent drain than that caused by vesicatories, is generally necessary. Our continental brethren are now employing the liquor ammoniæ, lowered more or less with oil, to effect both the above-mentioned purposes, and this measure we particularly recommend to the notice of the profession in our own country. If a sudden impression is wished to be made on the surface, one part of oil to two of liquor ammoniæ will rapidly blister the skin, and produce a considerable discharge afterward. If kept on a portion of surface, for instance, with a large cupping-glass, for an hour or two, an eschar will be formed, and thrown off, leaving a complete caustic issue or drain, which may be kept open for any length of time, and give exit to a great and permanent discharge.

The more easy and practical way is, to cut a hole in a sheet of adhesive plaster, the size of the required issue, and after the plaster is placed on the part, let a few folds of linen wetted in the ammoniated oil, be applied over the whole, and retained there for two or three hours, after which, a poultice may be kept on till the eschar falls off. We shall here relate

* *Reflexions sur l'emploi de l'ammoniaque, comme moyen propre d'établir des exutoires.* Par M. VAIDY, Journal Complimentaire, August, 1820.

a case from M. Vaidy in elucidation of the effects of an issue of this kind.

"M. R. 50 years of age, presented to M. Vaidy, in the beginning of February, 1820, the following symptoms :—face pale, and yellowish, with some flush on the cheeks—tongue yellow in the middle and red at the sides—sense of heat in the throat—breath hot and fetid—breathing short and distressing when speaking—cough troublesome and in paroxysms, especially during the night—expectoration difficult, yet in considerable quantity, viscid, fetid, and apparently containing nuclei of purulent matter. Percussion of the chest caused pain, and elicited a dull sound below and behind the right nipple—no appetite—thirst moderate—some wandering pains in the abdomen—several bilious evacuations every day—pulse concentrated, and rather quick—want of sleep—great dejection of spirits. Had been about eight months ill. M. Vaidy learnt, that this patient had been subject to liver-affections—to a hæmorrhoidal discharge, and to a bilious diarrhœa. Our author prescribed a vegetable diet—pills containing extract of opium—and ordered 24 leeches to the right side of the chest. The bleeding afforded no relief—the right side of the thorax continued painful, and the cough was violent. The patient despaired of life, and the doctor of success. A seton or moxa was proposed, but neither was agreed to. The patient consented to a blister. M. Vaidy informed the patient that he would employ a liquid blister much more efficacious than the common one. He therefore applied, by means of a large cupping-glass, an ounce of the caustic liquor of ammoniæ, mixed with half an ounce of oil of almonds. The cupping-glass adhered for two hours, at the end of which, the skin was found cauterized throughout its whole substance, with an eschar two inches in diameter. When this eschar began to separate, the edges of the sore acquired an excessive degree of sensibility, while, at the same time, the symptoms, previously enumerated, became more and more alarming. The patient could not sleep at all, and was constantly in pain. When the slough came away, a large and deep wound was left, the surfaces of which afforded a very abundant suppuration. From this moment, the amendment was visible. The expectoration became less fetid, less copious, and less purulent. Both patient and physician began to entertain hopes. At this time, an eruption broke out over the body, accompanied with great itching. He had several liquid stools daily, notwithstanding the opium. At the end of two months, the sore appeared to cicatrize, but was kept open artificially. The health now began gradually to be re-established, and at the end of three months, he could sleep, eat, and exercise. The breath, however, continued a little short, and the patient has determined to keep the issue open till the end of the year."*

* We conceive that the above case offers an example of affection of the lungs, resembling, and often ending in phthisis, but produced by a disordered state of some of the abdominal organs. In the present

M. Vaidy conceives, and we agree with him, that the measure in question, is a most valuable resource when we have to deal with timid patients, who are afraid of setons or the moxa. He thinks too, that the ammoniated issue is preferable to either of these means.

P. S. Since writing the above, we have seen some communications from Dr. Kennedy in the last number of the *Ed. Journal*, on the use of nitrous acid, as a substitute for blisters, where a sudden counter-irritation is wanted. It has been used in India, by Mr. Killet and Mr. Scott, for the treatment of the spasmodic cholera, and with advantage. They used two parts of acid to one of water, with which mixture, the surface is to be rubbed till the patient begins to complain of pain, when the acid is to be neutralized by washing the surface with a solution of salt of tartar. The cuticle can then be easily detached, leaving the cutis raw and denuded, to which, if necessary, the unguentum or emplastrum lyttæ may be applied to keep up the discharge.



8. *Hydrothorax*.* A soldier, aged 32, had an attack of splenitis, which was removed by the depletory treatment, a few days after which, he complained of pain in the right side of the thorax, with cough and fever. These were relieved by the loss of 24 ounces of blood. About this time, the heart was observed to beat more to the right side than it ought, together with an unusually strong action in the aorta. He was discharged convalescent, but re-entered the hospital a few months afterward, with great difficulty of breathing—pain and weight about the scrobiculus cordis, and along the whole left side of the thorax, frequent loose cough, pulse, 108, small but regular, temperature natural, urine scanty and high-coloured, bowels slow, decubitus difficilis on the right side, rest broken by frightful dreams, sudden startings from sleep, feels the motion of a fluid in the left side of the thorax on turning suddenly, which sensation Dr. Hennen also perceived both by sound and touch. Diuretics were prescribed, with a purgative, which gave but temporary relief. Paracentesis thoracis was determined on, and performed, when

instance, there is unequivocal evidence of considerable derangement in the biliary secretion, and also in the functions of the bowels. *Ed.*

* Dr. Hennen and Mr. Henderson.—*Ed. Journ.* 65.

four pints of a sero-purulent fluid were drawn off from an opening between the sixth and seventh ribs. The patient was immediately relieved, and passed a good night, which was followed by increase of appetite. The heart came more *in situ*, and its pulsations were obscurely felt in the left side. Diuretics were tried again, but left off; and by the 1st June, we find the patient with all his bad symptoms again, and evidence of a collection of fluid, the site of which was believed to be in the pericardium. On the 8th, the spleen was observed to be pushed down, by the weight of the fluid on the diaphragm. On the 10th, he was apparently incapable of living many hours, and by way of Euthanasian solace, the operation was again performed, and eight pints of a fluid more purulent than before, were drawn off. The result of the operation was wonderful. He passed a good night, and next day, had an increase of appetite. A canula was left in the wound, and more or less fluid was evacuated between this and the 5th of July, when death released him from his sufferings.

Dissection. Left cavity of the thorax contained two pounds and upwards of matter, containing large flakes of coagulable lymph.

A pseudo-membrane, half a line in thickness, coated the whole cavity, and was thickly covered with purulent matter. The lung was much reduced in size, and would not float in water. The other lung was sound. Pericardium thinned, and adherent to the heart throughout its whole extent. The heart of its natural size, as also its vessels. Spleen of a natural structure, and perfectly *in situ*. Other viscera of the abdomen healthy.

Remarks by Dr. Hennen and Mr. Henderson.

Both gentlemen were surprised to find the heart healthy, as it was all along considered to be enlarged, and water in pericardio. I am convinced, says Mr. Henderson, that the latter circumstance arose from our mistaking the small space that was unoccupied by the fluid in the chest, for the extended pericardium, and had we punctured it, as was at one time proposed, we should have done nothing more than we afterward did, viz. evacuated the matter contained in the left side of the thorax."

Dr. Hennen makes many judicious and candid observations on this curious case. He had opportunities of seeing the patient at various periods, before and after paracentesis, and never doubted of the existence of water in the pericardium,

Dr. H. remarks that, at one time, when he examined the patient :—

“While he lay on his back the pulsations of the heart were strikingly visible on the *right* side, extending over a circle, the diameter of which, was four fingers' breadth, and its central point directly corresponding to the middle of the fourth rib. These pulsations at once suggested the heart beating in a bag of water, and the sensation conveyed to the hand, confirmed the opinion thus suggested to the eye, while the ear was forcibly struck with the sound of dashing water, occasioned by the patient's spontaneous motions. Although no one doubted, at the time, that *all* the fluid had been removed from the general cavity of the thorax, and that consequently this noise was produced entirely from the agitation of the fluid contents of the pericardium ; yet dissection proved that a *part* of the water was prevented from running off by the interposition of the newly-formed membrane ; and the noise was no doubt greatly increased, by the admission of air through the puncture.”

Dr. Hennen acknowledges, that he overlooked the possibility of adhesion of the pericardium to the heart being the cause of some of the symptoms, which it very often is.

Our author, after making many highly judicious and important observations on the case in question, relates another, which illustrates the difficulty of ascertaining the morbid conditions of internal organs.

A soldier, 25 years of age, was received into hospital on the 14th February, 1820, labouring under severe dyspnœa, with pain in the right side of the chest, and amazingly quick and irregular pulse. Bled till relief was experienced, which required the abstraction of three pounds. The good effects were soon apparent ; for the temperature of the surface, before irregular, became now steady, and the pulse could be counted. The breathing, however, was still anxious, and he could not lie down. The heart palpitated violently and at each stroke, a fluctuation of fluid, within the thorax, was discernible. A large blister was applied over the seat of pain—feet immersed in warm water, and a purgative exhibited. When the bowels acted, the pain was relieved. No sleep that night. Next day the breathing was still laborious, but the pain had not returned. At night a violent spasmodic dyspnœa came on, and required venesection, which, however, failed to afford relief, and he lingered on three or four days, when he expired.

Dissection. Liver a good deal enlarged, and the gall-bladder filled with tar-like substance. The general cavity of the thorax was free from effused fluid, but 18 ounces of fluid were contained in the pericardium. The heart was small and



pale. The lung on the right side was collapsed, of a dark splacelated appearance, containing in its superior portion the sac of a large abscess, in which a small quantity of matter was still contained. The left lung was universally adherent to the pleura costalis, and its substance tuberculated throughout, or filled with vomicae.

It is astonishing, as Dr. Hennen remarks, how this man could have existed, with such a mass of disease in the thorax, particularly in the lungs. It is also a case which exemplifies the remark of Baglivi.

“O quantum difficile est cognoscere morbos pulmonum!”

Dr. Hennen knows of only one case on record of hydro-pericardii unaccompanied with effusion into the general cavity of the thorax, and that one is related by Sidren. It strikes us that we have seen some dissections of the disease.—Of effusion into this cavity, as one of the terminations of pericarditis, we have seen several, and cases innumerable are on record. But of genuine idiopathic hydro-pericardium unaccompanied by hydrothorax, three cases now lie before us, related by Dr. Romero, a Spanish physician, who opened the pericardium and drew off the water, twice with success. This operation he performed in eight cases, five of which were complicated with hydrothorax, and three were simply hydro-pericardium. As this gentleman's memoir is perhaps nearly unknown in this country, we shall present our readers with a very slight sketch of it here.

Dr. Romero, now a professor in the university of Huesca, in Arragon, formerly resided on the coast of Andalusia, where hydrothorax and hydro-pericardium are, as it were, endemic, from some peculiarity in the medical topography of the place. In Dr. Romero's opinion, the disease is there owing to a prevalence of hot and humid winds, with sudden atmospherical transitions. Ingurgitation and bad food are also blamed. Seeing that all the usual modes of treatment failed, Dr. Romero ventured on a most singular and dangerous plan, which was no less than opening into the pericardium itself.

Having first ascertained that the dropsical effusion does not depend on organic lesion of some neighbouring viscus, which would, of course, render the operation useless, Dr. Romero makes an incision between the fifth and sixth ribs, counting from above, close to the origin of the cartilaginous portion of the ribs, in people of middle stature, but between the fourth and fifth ribs, in people of small stature. This incision is carried through the pleura. Dr. R. then introduces his finger, and easily ascertains whether or not the pericardium contains a fluid. If it does, he makes an opening

into it with a pair of small crooked scissors, and permits the fluid to escape into the general cavity of that side of the chest, whence it is discharged, by placing the patient in a proper position. If there be no water in the pericardium, but only in the bag of the pleura, the first incision serves to give it exit, and no opening is made, of course, into the pericardium. If he is deceived totally in his diagnosis, and finds no water in either the pleura or pericardium, then the wound is healed, and no bad consequence ensues.

Our author is well aware, that this operation gives but a temporary relief, as in paracentesis abdominis for ascites, and consequently he endeavours to remove the causes, and prevent the recurrence of the disease. When water is found in either of the positions above-mentioned, the aperture in the pleura is kept open for four days, each day taking out the tent, and placing the patient in a convenient posture for favouring the escape of the fluid.

This operation has been performed, as we before stated, eight times, thrice for hydro-pericardium, and five times where hydrothorax was complicated therewith.

In conclusion, we may add, that Laennec, in his late valuable work on Mediate Auscultation, proposes that, in such cases, the sternum should be trepanned, as the easiest mode of evacuating water from the pericardium. There would be this danger, we apprehend, attending Laennec's operation, that air might possibly be let into the thorax, on both sides the mediastinum, in which event, death would be inevitable.

Since the above was written, we have looked into Leutaud, and there we find many cases of hydro-pericardium unaccompanied by effusion in the chest. In the first case, for example, there was a pint of water in the pericardium, and no mention is made of effusion elsewhere. In Obs. 612 (*lib.* 11) there were six pounds of serum in pericardio, one lung being gangrened, and the other suppurated. In Obs. 613, there were two pounds in pericardio, and the author distinctly states the absence of water in the chest. "Nulla aqua reperitur in cavitate pectoris." Obs. 415 and 416, from Morgagni, are to the same effect; in short, a great number of cases are here stated of hydro-pericardium, though a still greater number present complications of hydrothorax.

§ III. ABDOMEN.

9. *Fungoid Tumour in the Abdomen.** We shall introduce the following case in the words of our able author.

"William Norris complains of severe pain, extending from the spine of the right ilium downwards into the thigh, and sometimes towards the bladder. The pain, however, is not always equally violent, but subject to alternate paroxysms and remissions. There is a large tumour in the right hypogastrium, which, to the touch, appears solid. The body is much emaciated; the pulse quick, and exceedingly weak. Has never been troubled with vomiting, retraction of the testicle, nor the slightest symptom of hectic. The urine is high in colour, and very much loaded with mucus. The bowels require the frequent use of laxatives.

"Fifteen years ago he fell from a ladder upon his back, and has, ever since, been occasionally subject to slight attacks of pain in that part; from which, however, local applications always relieved him, until about twelve months ago, when the affection recurred with unusual severity. He then obtained admission into St. Thomas's hospital; and through the advice of Dr. Scott (one of the physicians to that Charity) underwent repeated cuppings and vesications, and used a variety of medicines internally, but [as he reports] with no other effect, than that of removing the seat of the complaint, to the spot it now occupies. Ordered anodyne fomentations, with balsam of copaiba, opiate injections and pills—and an aperient electuary occasionally.

"29th. Was seized with almost incessant vomiting of a green matter exactly resembling softened verdigris, to allay which the effervescing draught was ineffectually administered. The treatment was now wholly confined to opiates and anodyne fomentations, from the latter of which remedies he obtained a temporary mitigation of pain.

"30th. Sunk under the continual efforts of vomiting.

"*Dissection.* With the assistance of Mr. Young, a surgeon of this place, I proceeded to examine the body on the following day.

"It exhibited nothing unusual externally, except a swelling in the right hypogastrium, the skin of which was, in places, discoloured with extravasated blood.

"On laying open the abdomen, an enormous tumour presented itself, occupying nearly THE RIGHT HALF OF THAT CAVITY. In figure it resembled a flattened oval, or rather the shape of a kidney, prodigiously enlarged, for which, at first, it was mistaken. It assumed a livid or a purple appearance, and was covered anteriorly by the peritonæum. It had displaced about six inches of the colon from

* Frederick Bailey, M. B. Physician to the Reading Dispensary.

its situation in the right lumbar region, which was found lying obliquely across the central part of the abdomen. It adhered very strongly to this gut, at its back part, by means of copious exudations of coagulable lymph, which possessed a remarkably livid appearance; and at that portion of the peritonæum which was contiguous to the tumour, was much thickened by similar exudations. On cutting into the tumour, it was discovered to consist entirely of a BLACK GORE, considerably FIRMER than the crassamentum of the blood, and weighing, as nearly as could be conjectured, about four pounds. At its posterior part, the tumour had no covering similar to that it had anteriorly, but the grume lay in contact with the muscles at the back of the abdomen; and, on tracing its course upwards, it was found to communicate with the first lumbar, and three last dorsal vertebræ, all of which were in a CARIOUS CONDITION. The right transverse processes of the three lowermost were absorbed, and also a portion of their bodies on the same side, presenting to the touch a rough and jagged surface. But the 10th vertebra of the back was in a state of the greatest decay. This had lost all its transverse processes, and only a small portion of its body remained. The intervertebral substances seemed to have sustained little or no injury. The bones however were not the only structure that suffered. The muscles that ran contiguous to these carious vertebræ, WANTED THEIR USUAL CHARACTERISTICS. Such parts of them as were in immediate contact with the caries, were converted into a PAPPY OR STEATOMATOUS MATTER, whilst those a little more remote, were changed into a PALE SUBSTANCE, almost destitute of FIBROUS APPEARANCE, and so SOFT as to be VERY EASILY TORN. The right kidney was pushed a little upwards. The liver looked pale, but the gall bladder was distended with bile. The urinary bladder exhibited strong proofs of inflammation in the peritoneal covering of its fundus, and its inner surface was much loaded with mucus. In the right groin I observed two or three enlarged glands."

10. *Spiculæ of Bone in the Stomach.** A gentleman at dinner swallowed a small fragment of bone. In the evening he felt pain in the centre of the scrobiculus cordis, with sense of anxiety, with periods of remission and aggravation, in the latter his pulse becoming small, hard, and quick, with a cold sweat over the surface, and intense anxiety. Change of posture produced occasional relief. All these symptoms quickly vanished by the use of diluted muriatic acid. Some other cases are related, of similar tendency, and with equal success. The acid should be taken as strong as the stomach will bear it, and pretty frequently, that a solvent action may

* By Joseph M'Sweeney, M. D. *Ed. Journal*, 62.

be kept up upon the foreign substance. These cases do great credit to Dr. M'Sweeny.

11. *Relaxed Rectum.** We are sorry we cannot coincide in sentiment with Mr. Chevalier, "that an inflammatory excess of action in the vessels of a part, is always accompanied with a loss of its tone." We can very well conceive that a loss of tone succeeds high inflammation in the intestinal coats, as well as in other structures of the body, but we are far from believing that *distention*, from loss of tone, is the *concomitant and effect* of strong peritonæal inflammation. In the latter complaint the function of the mucous membrane of the gut is so much deranged that great quantities of aeriform fluids are rapidly formed, and these by distending some portions of the canal cause irritation and spasmodic contraction, or twistings in other portions, which lock up the gaseous productions, and greatly tend to increase the distress of the patient, as well as aggravate the peritoneal inflammation.

Mr. Chevalier admits that parts of the intestinal canal may become relaxed, and consequently distended, without inflammation, probably from mere loss of tone. The transverse arch of the colon is peculiarly liable to this affection. The extreme distention of the abdomen in tympanites, Mr. C. thinks, is chiefly seated here, and a less degree of it frequently accompanies ascites, occasioning an apprehension, in the mind of the physician, that there is a much larger quantity of fluid in the abdomen than actually exists. This circumstance is to be borne in mind by the surgeon, "who might otherwise be induced to tap the patient, and puncture the intestine by his trocar."

"In such instances, the fluctuation is more obscurely perceived, and it is chiefly at the lower part of the abdomen: the enlargement is greater above the naval than below it; and when the upper part of the belly is struck gently, by the hand, it gives that peculiar sensation and sound which a membranous cavity filled with air communicates."

In many cases of this kind our author has refused to operate, having found in those bodies which he had an opportunity of examining, after death, that the quantity of serous effusion has been much less than was suspected, and that it was moreover, irregularly encysted among partial adhesions

* Observations on the relaxed Rectum. By Thomas Chevalier, Esq. F. R. S. &c. &c. *Med. Chir. Trans.*

which had been excited by the irritation of some visceral disease.

“If it should be thought adviseable in such a case to puncture the abdomen, the operation should be performed by the cautious introduction of a lancet through the *linea alba*, and not by a *trocar*.”

Dilatations occasionally take place in the sigmoid flexure of the colon, where *scybala* may be retained for a considerable time by the valvular projections of its internal coat, although a tolerably regular evacuation of *fæces* may be daily going on.

The prolapsus of a relaxed portion of rectum is often observed and well known; but Mr. Chevalier does not think that practitioners are so well aware that the gut is subject to an excessive dilatation within the pelvis, and to a semi-prolapsus of its upper into the lower part. Such a state of the bowel, however, our author asserts, does frequently occur, producing very distressing symptoms, and especially proving a common cause of that obstinate and habitual costiveness, under which some persons continually labour.

The lower portion of rectum is easily distensible; but while in its natural state, the peculiar sensibility of its mucous membrane speedily excites it, when moderately distended, to expel its contents; and its muscular fibres are competent to this office (unless the *fæces* are unnaturally hard) with a very moderate assistance from the abdominal muscles. It is needless to say that it is very important to health, to preserve the sensibility of this portion of intestine unimpaired by strict attention to the regular performance of its functions. If this be long neglected, the natural sensibility gradually diminishes; the bowel becomes surcharged for an undue time, and the energy of the muscular fibres is impaired, so as to require a more forcible exertion of the abdominal muscles to expel the stools; and even this, sometimes, cannot be done without the assistance of medicine.

Under these circumstances, the superior portion of the rectum, and the lower part of the colon become sometimes so overloaded, and, at the same time, so deficient in action, that a great exertion of the abdominal muscles is excited for the propulsion of the *fæces*, when the upper, and undilated portion of the rectum is forced downwards into the lower and dilated portion, where it may be distinctly felt like a loose bag, of which it is difficult to detect the aperture by finger or bougie. The stools are now voided with difficulty, and in small irregularly shaped pieces, attended often with *tenesmus*, piles, or an increased secretion from the inner surface of the intestine. In men, the irritation is frequently com-

municated to the prostate gland, and neck of the bladder. In other instances, especially in females, the parts become so relaxed as to allow of a sufficient accumulation of fæces to fill up the whole pelvis, while the patient is very unconscious of such an accumulation as the following case will show :—

A lady, who was afflicted with cancer of the breast, was confined to bed by severe pain in the loins ; soon after which, she became unable to pass her urine, and it was drawn off at proper intervals by the catheter. Yet, on inquiry, she asserted that her stools were regularly evacuated, and in sufficient quantity. In about a fortnight after this, her attendants one day observed that the anus was dilated to the size of a half-crown, by the protrusion of fæces, which had so stuffed the rectum as to completely choke up the pelvis ; and although not hardened, the quantity prevented their being removed without the assistance of instruments. We have met with a similar case ourselves, and we know from dissections which we have made, that hardened fæces will lurk in the cells of the colon, particularly about its sigmoid flexure, for months—we had almost said years, while the more fluid fæces daily pass them and are evacuated per anum. These fæcal deposits nevertheless keep up a constant *organic* irritation in the system which the patient is totally unable to describe, or describes in a way that is more likely to lead the physician astray than direct him to the true source of irritation. This is one among the many inconveniences which would be obviated, were people in the habit of using lavements here, as they are in France.

When an upper portion of rectum is forced down into a lower, as has been described, the lower part of the colon is kept in a state of irritation, and an obscure heavy pain is felt in the loins, and about the sacrum, with such difficulty of voiding the fæces as often leads to the suspicion of stricture. Under these circumstances, an increased secretion of mucus from the surface of the colon may take place in a considerable amount, so as to collect in some of its sacculated portions, and to be discharged in a large quantity, and of a yellowish appearance resembling pus, causing a belief that an abscess had burst internally. The matter, Mr. Chevalier observes, is more tenacious than true pus, is not mixed with blood, and the discharge does not go on, as in case of abscess. If the state of the bowels be now properly attended to, all may do well.

This affection is most incident to females and to those who lead a sedentary life, overlooking irregularities of action in the bowels, and deferring obedience to the calls of Nature. Here purgative medicines are usually had recourse to, and

the whole intestinal canal is irritated, for defective action in that very part which is most remote from their influence. The general health now often suffers; all the evils resulting from costiveness taking place, while hypochondriacal gloom and dejection oppress the mind.

In respect to treatment, the principal and most certain relief is to be obtained by the regular use of lavements, till the rectum becomes re-accustomed to empty itself in an *habitual* way.

Where the very lowest part of the rectum continues so dilated as still to allow the upper portion to descend, a strong decoction of oak bark or galls thrown up every night will be attended with the most beneficial effects. If not readily retained, some tincture of opium may be added to it. Should inflammation take place, which sometimes happens, at the prolapsed part, so as to consolidate the surfaces together, a permanent stricture or obstruction is formed, which, by the frequent irritation necessarily attending it, may take on a cancerous character, and of course prove fatal.

This paper, upon the whole, is a very interesting one, and therefore we have given a minute analysis of it.

12. *Entero-Epiplocele*.* A gentleman, aged 42, was affected with a double scrotal hernia, one of which was reducible; the other was irreducible, the size of a large fist—the irreducible part consisting of omentum adhering to its sac. For two years it had been troublesome, painful, and, during the late summer heat, had increased in size, apparently from a recent descent of intestine. In a consultation of Messrs. Brodie, Bampffield, and Prower, the patient was recommended to try the horizontal position for two months, to which he consented. Four times a week Mr. Bampffield perseveringly employed the taxis, as long as the patient could bear the pain it occasioned. He was also enjoined to support the omentum, and employ as much pressure with his hands as he could in the proper direction of the ring. A draught of ol. ricini was ordered twice a week. In a fortnight the rupture was more than half reduced. In three weeks it was pushed entirely into the abdomen. This case is very creditable to the well-known talents of its excellent author.

* R. W. Bampffield. *Med. and Phys. Journ.* 230.

13. *Ovario-Gestation.** Fortunately these melancholy accidents are rare, for Nature is generally correct in all her reproductive operations. The victim to the present aberration was a lady, 39 years of age, who died on the 9th June, 1819, and was examined by Dr. Granville. She had suffered severely, and almost uninterruptedly, from the 12th of the preceding December. The abdomen being laid open, several pints of a fluid resembling blood were discovered filling every space not occupied by the viscera. Many large coagula of blood lay dispersed over the surface, or among the convolutions of the intestines. A tumour, four times the size of a hen's egg, partaking of the general black-reddish hue of the surrounding parts, obscured the view of the pelvic viscera, even after the intestinal mass had been removed.

"A blood-vessel of the size of a large crow-quill, which penetrated the dense portion of the tumour, was traced upwards to the descending aorta, and was ascertained to be a branch of the left spermatic artery. A smaller and much shorter vessel, arising from the tumour, was also found to communicate with the spermatic vein; thus establishing a complete circulation to and from the parts. The inferior and left half portion of the tumour presented a surface consisting, in two or three places, of diaphanous membranes, through which a fœtus of about four months growth was readily discovered." 2.

The left ovary was the seat of the tumour which progressively distended the coverings of that organ, and at length burst it in several places, when the membranous sac forming the tumour protruded partially into the cavity of the abdomen.

"During this destructive process, that part of the covering of the ovary was also lacerated, over the inner surface of which the placenta was engrafted, so as to tear the adhesions of the latter, thereby producing that sudden and fatal hæmorrhage which destroyed the life of the mother and the child, and filled the cavity of the abdomen with blood." 3.

The womb had acquired a considerable development during the increase of the fœtus, so as nearly to have reached the size which it usually attains in the fourth month of regular utero-gestation. Its parietes were thickened in proportion—its orifice was closed—but within its cavity neither

* A case of the human fœtus found in the ovary, of the size it usually acquires at the end of the fourth month. By A. B. GRANVILLE, M. D. &c. &c. *Philosophical Transactions.*

fluid, membrane, nor production of any kind was found.* Two beautiful engravings by Bauer illustrate the text of Dr. Granville's paper.

14. *Uterine Hæmorrhage.*† In a case of very lingering first labour, and after the child's head had been impacted in the pelvis for ten hours, with little or no advance, and when the uterine efforts were decreasing, rather than increasing, Dr. Campbell applied the forceps, (and we sincerely think in this case justifiably, though we are no great advocates for the forceps in general) and delivered the head after an hour's strong exertion. The uterine efforts were still unequal to the expulsion of the body, and manual assistance was given in its extraction. After exhibiting half a wine glassful of brandy, as a cordial, the hand was placed on the abdomen, and the uterus could be felt "like an immense flattened pouch;" the placenta also could be readily recognized within it. Frictions over the abdomen, and a moderate degree of extracting force applied to the chord, had no influence in exciting the action of the uterus. On pressing the hand on the latter organ, a gurgling noise in the passages was heard, and a stream of blood immediately issued over the bed-side. The appearance of the patient and the state of the pulse corresponded with this alarming phenomenon. The hand was instantly introduced into the uterus, which was pouring out blood in profuse quantities, and, on reaching the placenta, Dr. C. discovered that the greater part of it was detached—thus causing the hæmorrhage. Pressure with the back of the hand on the internal surface of the uterus had no effect in rousing it to action. The Dr. therefore immediately, and with ease, extracted the whole of the placenta. The flow of blood, nevertheless, continued unabated, although the clenched hand was pressed, in different directions, on the bleeding surface, and the patient appeared to be sinking. The pulse left the wrist for about twenty minutes, and universal coldness prevailed. The patient lay insensible, but still breathing under great restraint. Another practitioner was now sent for; but before he arrived, the uterus began to contract and restrain the hæmorrhage. The pulse was returning, and the patient began to give faint answers to ques-

* The lady had been the mother of seven children. She had menstruated regularly up to December, when conception took place, from which time there were occasional irregular discharges of a coloured fluid from the vagina.

† Dr. W. Campbell. *Ed. Journal*, 65.

tions. The other practitioner grasped the uterus through the abdominal parietes, while Dr. C. pressed with his hand on the concave surface of the organ. It was full an hour before the hand could be withdrawn, and with it several coagula came away. About 64 ounces of blood were lost.

From the moment that the hæmorrhage was noticed, Dr. C. forced the patient to swallow a wine-glassful of undiluted whiskey, every five minutes, until the pulse returned—making in all about thirteen ounces of spirits. Injections of spirits and water were also thrown up the rectum. No bad consequences followed, and the lady had a rapid recovery.

Dr. Campbell, as appears to us, did right in proceeding to extract the child by means of the forceps. Whether it was afterward necessary or proper to give the half glass of brandy, the account is hardly sufficiently explicit to show. As a general rule, we think it injudicious to give a powerful stimulant immediately after the child is born, but circumstances may undoubtedly render this a very necessary practice.

There seems to have been quite cause enough for introducing the hand to extract the placenta; this operation is always very much facilitated by making an assistant press with both hands equally upon the abdomen, for hereby the uterus is kept more steady for the operation, and a disposition to contract is given to the uterus, on which the success of the operation mainly depends. It does not appear from the account, that this very necessary part of the process was attended to. We are not aware that "the clenched hand pressed in different directions on the bleeding surface of the uterus," is likely to excite contraction; irritating the *os uteri* seems to be a more effectual mode. The late Mr. Cruickshank used to recommend, that a sponge dipped in vinegar and water should be carried by the hand into the uterus, and the liquor be squeezed out into its cavity, with the view of producing contraction, this we have never tried; but have introduced rags, dipped in vinegar and water, or, what we prefer, port wine, into the vagina for the same purpose, and often very successfully.

A wine-glassful of undiluted whiskey is forced upon the patient every five minutes, "from the moment the hæmorrhage was noticed." Had this been given from the moment syncope occurred, we should not have objected to it. But to employ cordials and stimulants during the active state of hæmorrhage, not only seems to us uncalled for, but positively hurtful. The generally adopted practice of cooling the apartment and the patient; of applying cold vinegar and water over the abdomen and pubis; of making pressure

upon the uterus; of introducing ice into the vagina, or, as before-mentioned, port wine, seems to us much more proper practice. The exposure to cold, however, we have repeatedly seen carried too far; it has been persisted in after the hæmorrhage has ceased, or become very passive, and syncope has come on. At such a time the cordializing plan requires to be adopted.

We are not very strong advocates for opium, either solid or fluid, in uterine hæmorrhages. But as a remedy for some of the consequences of hæmorrhage, nay, perhaps for some symptoms attendant on the state of hæmorrhage, it may be occasionally useful. The restlessness and irritability consequent to, or accompanying, uterine hæmorrhage particularly, is perhaps best quieted by laudanum.

If we are right in our opinion, respecting the use of laudanum in floodings, there must be much mischief occasioned by its so general and promiscuous use. But names of such high authority are mentioned in favour of it, as almost leads us to doubt the accuracy of our own observations and reasoning.

15. *Hernia*.*—CASE. "Mrs. Seruya, ætat 60, of emaciated form, and infirm constitution, had been afflicted with ascites, and femoral hernia on the left side, for some time. On the 13th September, 1818, she experienced a sudden descent of the rupture, accompanied with violent pain, syncope, and vomiting. The usual symptoms of strangulated hernia ensued, and after various trials by the taxis, it was agreed, in consultation with Messrs. Barker and Donnet, of Gibraltar, to operate. The operation was accordingly performed at seven in the evening, by candlelight. On laying open the sac, the stricture at Poupart's ligament was found very firm. *I dilated it obliquely upwards and inwards*, and reduced the gut. Common dressings were applied. At ten o'clock we were sent for, as an alarming hæmorrhage had taken place. We found the patient much exhausted—covered with cold clammy sweats—pulse scarcely perceptible. In short, she had every appearance of approaching dissolution. The bedding was completely soaked with blood. The dressings were removed, and sponge, with graduated compresses, supported by a firm bandage, applied. The hæmorrhage continued, and we had no alternative (the reduced state of the patient not admitting time to search for the artery) but to trust to compression by the hands, which was continued during the whole night, and part of next day.' Every time the hand was withdrawn, the blood

* Case of violent hæmorrhage, after an operation for strangulated hernia, where long-continued pressure succeeded. By WILLIAM MATHIAS, Surgeon, Gibraltar.

flowed. At the end of 48 hours, the compresses were removed, and no hæmorrhage returned. But she remained in a very doubtful state for some time, being subject to palpitations of the heart and syncope. Ultimately, however, she entirely recovered."

What artery was cut in this instance? Is it a good direction to *cut upwards and inwards*? We believe the direction should be *directly upwards*, both in femoral and inguinal hernia.—*Rev.*

16. *Wounds of the Intestines.** Baron Larrey has had extensive opportunities of observing these sorts of lesion from musket shots, and their susceptibility of cure, by the resources of nature, assisted by art. Suppose a projectile body penetrates the abdomen of an adult, and destroys a portion of ileum or colon in its track. The contusion of the parts struck is necessarily accompanied by some tumefaction, and a degree of contraction in the trajet of the ball. The intestinal contents either find their way through the external wound, or lodge in the track of the wounding body, without communicating with the general cavity of the abdomen. To assist Nature in her work, the Baron is careful in searching for the wounded part of the intestine, in order to bring it to the edge of the external opening, and confine it there by a loop of thread passed through the mesentery.

"We have had occasion to attend after many battles to a great number of soldiers wounded in this way, the cure of all of which have generally been conducted in the following manner:—Up to the period of the separation of the eschars, or sloughs, the alvine evacuations pass in small quantities by the wound; but afterward, finding no obstacle, they issue freely, and continue till the entire cleansing of the wound; at that period, it becomes proper to favour the approach of the edges of the two wounds, both those of the external parietes of the abdomen, and those of the wound in the intes-

* Observation sur une plaie du bas ventre, avec lesion d'un intestin grêle; précédée de quelques réflexions sur les plaies des intestins en general. Par M. LE BARON LARREY. *Journal of Foreign Medicine and Surgery*, No. VIII. for October, 1820, and LA REVUE MEDICALE, for July, 1820.

☞ We may here take an opportunity of expressing our joy at seeing our respected cotemporary, the *Quarterly Journal of Foreign Medicine*, again return, after two months absence, without leave. Among many other interesting articles in the last number, we beg to draw the attention of our brethren to an able paper on Climate, and another on Yellow Fever. We confidently hope that the Profession generally, will patronize this useful and meritorious Journal, which evinces equal honour and ability in its conductors.

time, by aid of slips of sticking plaster (*Bandelettes agglutinatives*), and a slightly compressive concentric bandage—the two wounds approach each other gradually and at the same time—the parts homogeneous to each other naturally adapt themselves, contract a mutual adhesion, and form the cicatrix, which first displays itself on the wound of the intestine, and so gradually extends itself from within to the exterior—the intestine itself also experiences a degree of contraction correlative to the original loss of substance.

“The greater part of the early adhesions disappear or become effaced in succession, and those parts which had experienced any transposition recover their natural and respective position, with the exercise of their functions; phenomena which we have already taken notice of in wounds of the belly attended with protrusion of the epiploon.” *Journal of Foreign Med.* p. 391.

When the intestines are wounded by a sharp or polished weapon, they do not present the same phenomena. They are, our author thinks, more dangerous, and require prompt assistance, than in cases of wounds from balls.

“Two main proceedings are pointed out in their cure: the one consists in retaining the wounded portion of the intestine, at the lower part of the wound of the belly, by means of a loop (*anse*) passed into the mesentery, in order to prevent any effusion of the alvine matters into the abdominal cavity; and to give time for nature to isolate the wounded intestine, (in like manner as happens in wounds from firearms) till the causes of irritation are entirely subsided; till the lesed parts gradually recover their original position, and the lips of the intestinal wound mutually approach so as to become cicatrized, for this is the true cure effected or attempted by nature: and this, without doubt, is the most advantageous and the most ready mode of proceeding.” 391.

The second indication consists in a kind of invagination of the wounded intestine, by means of a simple suture, “aided and supported by loops of thread, passed into the substance of the two ends of the wound of the intestine, and sometimes by interior ones.”

Our author admonishes us to be careful to comprehend the least possible quantity of the intestinal tube within the points of the suture, lest we diminish the calibre of the bowel, and thus obstruct the passage of the alvine contents.

The suture is to be made by the over-cast-stitch (*à point par-dessus*) and the threads ought to be waxed and smeared with some mild cerate. They ought also to be of sufficient length to come outside of the wound, there to be retained till the time of their extraction, which is from the fifth till the seventh or ninth day. It is necessary to state, that the Baron uses a *double* glover's stitch, one thread being black and the other white, a complication in our opinion, equally trou-

blesome and unnecessary. The Baron directs us to replace the knuckle of intestine within the cavity of the abdomen "in such a manner that it may move itself freely; because if we retain it on the edge of the exterior wound, we shall cause it to suffer a series of flexures, which will impede the course of the *fæces*."

The slight adhesions which take place between the edges of the wound and the ambient parts are, the Baron asserts, only temporary, and are insensibly separated by nature, in the progress of the cure.

Inflammation, of course, constantly supervenes on the mechanical irritation produced by the suture, and to combat this, the Baron affirms that nothing more is necessary, than cupping-glasses with scarifications, promptly applied "in a parallel series from the upper to the lower part of the belly, *imitating the march of the galvanic fluid from the positive to the negative pole*; (a curious idea truly) and these applications must be repeated as often as may seem necessary."

"We ought to follow up these local depletives and derivatives, with oily embrocations, and tepid bathings, emollient glysters, iced and mucilaginous drinks taken in small quantities and often repeated—general blood-letting is rarely necessary."

General blood-letting may not be necessary in France, but we should not like to trust to local detractions of blood in this country, when the abdomen was penetrated and an intestine wounded.* Still farther are we from agreeing with Baron Larrey, that cupping the abdomen is the sole treatment required in the yellow fever. The Baron knows little of this disease, or he would not propose any such measure, excepting as an auxiliary.

We shall considerably abridge the following case, which the Baron introduces in illustration of the foregoing precepts.

Jean Jolin, 25 years of age, fell on his own sword (a naked sabre) on the 27th April, 1820, and received a deep wound in the abdomen. Being taken to the neighbouring village of Picteau, Dr. Carré found the wound fifteen lines in length, running in a transverse direction on the lower part and right side of the belly, attended with a strong protrusion of the ileum which had already become tumefied. The man had nausea and vomiting. On examining the protruded intestine, M. Carré found a wound in it of some extent discharging stercoraceous matter. He closed it by the glover's suture, and replaced it in the ventral cavity. The wounded man was

* See the second edition of Dr. Hennen's excellent work on Military Surgery, page 401 *et seq.*

then dressed, and strange to say, he was sent off to the Military Hospital in Paris. "During his journey, which was a very painful one, he had many copious vomitings and a bloody alvine evacuation." We never heard of such imprudent (we had almost said inhuman) conduct, as the sending a man with wounded intestine, to a distance, where no military movement required such a step. On arrival at Paris, the surgeon of the guard discovered a tumefied portion of the small intestine protruded, without any appearance of wound, which he immediately returned. Dressings were applied, and emollient drinks and glysters were exhibited. The patient was greatly debilitated, and spent the night in permanent anxiety, with bilious vomitings, violent colicky pains, tenesmus, and slight sanguineous discharge per anum.

Next morning the Baron dilated the wound, which enabled him "to discover through a considerable sanguineous accumulation established behind the wound and in the peritoneal cavity, many circumvolutions of the intestine, which had already contracted adhesions one with the other." Although there were strong symptoms of internal strangulation, they durst not tear these adhesions to get at the strangulated portion of bowel. They contented themselves with evacuating the blood effused into this kind of reservoir, and dressing the wound with linen, in which holes were cut.

Many very bad symptoms now came on, as small and frequent pulse, pale countenance, dull watery eye, coldness of the extremities, frequent nausea and vomiting, evacuations tinged with blood, abdominal pain, and tympanitic distention. Cupping was now employed, and by the time that the third or fourth glass was applied, the tympanitic state of the belly sensibly diminished. The patient experienced relief, and, in a little time, passed by stool several evacuations of a biliary and sanguineous character. The cupping was repeated all over the abdomen, and then camphorated oily embrocations, followed by light anodyne cataplasms, glysters, &c.

The night was tolerable; but in the morning several bad symptoms returned, especially the colic pains and vomitings. Again a sensible improvement was obtained by cupping, which lasted eight or nine hours, when the bad symptoms returned with such violence that they did not expect the patient to live from one moment to another. The cupping-glasses, with and without scarificators, were repeatedly applied, which, with the aid of sedatives and mild purgatives, produced a visible amelioration. A blister was applied all over the abdomen. They had now arrived at the eleventh day, on the night of which "the disease came to a crisis by two



phlegmons, which formed in the regions of the parotids. From that moment all the inflammatory symptoms of the belly almost in an instant disappeared, and the patient, on the 13th day, had copious evacuations of fecal matter." A thread, three inches and a half long, now issued from the wound of the belly. He was completely cured by the 60th day.

We believe that English surgery would not have interfered so much with the efforts of Nature in this case, and that English surgeons are, upon the whole, more cautious of the scalpel and needle in cases of wounded intestines. We wish, however, to draw the attention of our brethren here to the extent to which cupping was carried, and the unequivocally good effects of this measure. We are confident that *local* bleeding is still too much neglected in this country, and on that account we are anxious to bring forward those cases which illustrate its beneficial consequences. In the class of injuries here descanted on, however, we are far from wishing to recommend an *exclusive* reliance on *topical* blood-letting. We have witnessed too often the powerful control which venesection exerts over abdominal inflammation, to discard such a measure from our methodus medendi.

17. *Bursting of the Urethra**—This is a most serious accident, and, as Mr. Bell justly observes, belongs to the higher departments of surgery, requiring a perfect acquaintance with the principles of the art, and a dexterous hand—one not partial to operations, yet not hesitating to do what appears bold, when the occasion calls for it.

"When the patient has had a stricture attended with much irritation in the perineum and neck of the bladder—when he has to strain and force to pass a few drops of urine—when the urine feels scalding hot—when the patient, on closing his legs, has a sensation of a tumour betwixt his thighs, though there be no such tumour there; then he is in danger of an extravasation of urine." 198.

If a patient with an irritable stricture has had the bougie introduced in such a manner as to induce inflammation and strangury, followed by cold shiverings, and then a hot stage—when there is a sensation of tenderness, heat, and swelling in the perineum, with violent forcing pains to make water, there is danger of the inner membrane of the urethra giving

* Mr. Charles Bell's Treatise on the Diseases of the Urethra Vesica, Urinaria, Prostate, and Rectum. New Edition, 1820.

way and permitting the urine to escape into the cellular texture of the scrotum and penis.

After these symptoms have continued some time, the patient feels that, at last, the water is flowing; but it does not appear outwardly. By and by, the scrotum becomes enormously distended, the patient is seized with shivering, &c. If the swelling be not immediately relieved by incisions, the integuments of the penis are distended, and the extravasated urine will spread over the pubes, lower part of the abdomen, and even the loins. The consequences are often terrible. A dark inflammation affects the skin that is undermined with urine—the skin sloughs—the whole scrotum separates, and leaves the testicle exposed.

Mean time the violence of the fever subsides—the pulse is quick and feeble—the countenance changed—the features shrunk—and gastric irritability with hiccup sets in. The patient sinks, if not supported. Mr. Bell, after relating a great number of most interesting cases, which cannot be too often studied by the surgeon, makes the following observations :—

“ 1. It appears that punctures of the scrotum are insufficient even to empty the cellular texture of the extravasated urine, and quite unfit for preventing the urine taking the same course a second time. If the lancet be used, the shoulder must be moved, while the point is kept at rest, so as to make a large opening in the skin.

“ 2. For the most part, the urine bursts into the perineum, and is carried by the fascia of the perineum forward into the looser scrotum. In this case the opening into the scrotum must be at the back part, and the point of the instrument directed backwards, so as to cut freely through the fascia, and give issue to the urine as it escapes from the perineum.

“ 3. But it will be seen here, that the extravasation takes place sometimes more anteriorly, and the *œdema* of the preputium is the first sign of the approaching danger. In all cases, therefore, it is proper to sound the urethra with a bougie (and this should be done in the gentlest manner,) to ascertain the place of stricture, that the puncture may be directed with reference to the spot from whence the urine issues from the urethra, and which is always behind the stricture.

“ 4. The urine has a deadening effect on the cellular membrane, when it is permitted to fill the integuments. When in a smaller quantity, and with diminished force, it produces a blush of erysipelas, which subsides and rises again in the form of more phlegmonous inflammation. This was particularly the case in two instances, and the fever and the hard swelling of the skin required cold and sedative applications.

“ 5. In most of these cases, the yielding of the urethra was preceded by a state of much excitement and irritation. An ulceration

of the urethra is a consequence of this irritation, and the membrane is thereby weakened. The push of urine bursts through this tender part, before there is consolidation of the surrounding parts, or before the cells of the common texture are glued together by the process of inflammation. Hence there is no limit to the flow of urine, and hence the dangerous nature of the accident: for the general powers of the system quickly sympathize with the death of the part, and fall low; and there is a just apprehension of the patient sinking.

"6. The circumstance of irritation preceding the rupture, teaches us to be particularly cautious either of exciting the urethra by interference with instruments, or of permitting a fever to be raised by imprudence on the part of the patient, in a certain state of stricture with irritation. I need not here repeat what may be the dreadful consequences." 237.

This view of the subject teaches us also that when the urethra is burst, and free passage is given to the urine, we must make it a principal object to allay irritation. It sometimes happens too, that after we have made a free passage for the urine, the integuments of the penis are again puffed up by a serous effusion, the consequence of inflammation.

If we see this state early, or when forming, it is best treated by cold applications—if late, or when formed, with tepid fomentations. If it be confounded with a urinous tumefaction, and a catheter introduced to draw off the water, the swelling will increase, and terminate in suppuration.

Upon the whole, this section of Mr. Bell's work abounds in important matter and solid instruction for the practical surgeon.

18. *Dysmenorrhœa*.* Dr. Dewees considers it to be a matter justly challenging surprise, that this painful affection of the uterus should have attracted so little notice from the earlier writers on medicine, while almost the whole of the more recent authors are involved in the same charge of supineness towards a disease deserving serious attention. The relief of pain is but a subordinate consideration. The complaint removed, the married woman, hitherto doomed to barrenness, becomes fruitful, and fulfils the end of her creation. It is to Dr. Denman we are chiefly indebted for the history and real character of this complaint. Drs. Cullen and Fothergill have mentioned the affection; but neither of them has adverted to its most remarkable attendant—the discharge of a membrane.

* On Dysmenorrhœa. By WM. P. DEWEES, M. D. *American Medical Recorder*, Vol. I.

Morgagni,* long before Dr. Denman, had given a very curious case of this kind, which was overlooked by Dr. D. The latter, although he notices the formation and escape of this deciduous substance, attempts no explanation of its origin or the consequences to which it gives rise. He merely states that "the pain is to be attributed to an increased degree of irritability in the habit, or to the difficulty with which those vessels designed for the menstruous discharge became permeable," which is saying little. Dr. Fothergill's explanation runs thus:—

"This excruciating pain seems to be spasmodic, and to proceed from the extreme irritability of the uterine system: the blood naturally determined hither, in order to its being discharged, by distending the very irritable vessels, occasions the spasms; this produces a constriction of the vessels; they become impervious, and the nixus to the discharge continuing, the pain becomes exquisite and general, till the patient, worn out with the struggle, is debilitated and sunk; the fluids are then dismissed, some ease succeeds, but the patient is often so reduced as not to recover her usual strength before she has another conflict to undergo."† *Medical Recorder*, p. 156.

Dr. Fothergill and some other physicians have remarked that sterility generally accompanies the complaint. The following extract contains Dr. Dewees's description of the affection under consideration.

"This complaint for the most part commences in women who are obnoxious to it, with the first menstrual periods, and unless prevented, most pertinaciously continues at every subsequent return of the Catamenia.‡ We have never observed any particular constitution or temperament especially liable to it. We have witnessed it both in the delicate and robust; in the sanguineous and the phlegmatic. The discharge commences sparingly for some time, and is then for a short period, almost altogether arrested; so soon as this happens, pain is felt, and this returns and intermits like the pains of labour—after a continuance of these alternate pains for an uncertain period, relief is sometimes suddenly experienced, and there is found discharged from the vagina a membranous substance, of uncertain size,—sometimes it resembles when spread out the form of the uterus; at other times it is broken into fragments, but always maintains its membranous texture.§ So soon as this membrane is com-

* Epist. xcvi. Art. 12.

† Fothergill's Works, p. 468.

‡ The woman may however become subject to this complaint at any period almost of the menstruating time of life. I have, in more instances than one, known it to follow abortion.

§ Dr. Denman declares this membrane to be smooth on one side, and flo-

pletely thrown off, the woman is relieved, unless there be a fresh production of this substance to stimulate the uterus to new exertions, and to new torments ; this is by no means unusual, and several days are sometimes employed before these efforts cease—at other times a few hours are all that is required to restore the woman to tranquillity. It is remarkable, that the quantum of pain is not always in proportion to the quantity of membrane discharged—we have seen extreme torture from a very small portion, and less pain where the deciduous product was considerable. But this is not difficult to account for.

The virgin and the married woman are equally the victims of this distressing complaint. We have known it to commence immediately after marriage where it had not previously existed ; and on the other hand, we knew it once to cease after this consummation.

Beside the alternate pains which we have just noticed, there is almost always a distressing aching in the back and hips, and which almost invariably announces the approach of the period ; nor does this cease, in many instances, until two or three days have elapsed after the catamenial flow." 158.

In attempting to account for the formation of the deciduous membrane above described, Dr. Dewees observes that it is now generally agreed that the menstrual discharge is not blood, but a peculiar secretion. Among other differences between it and blood, may be mentioned, 1st. that it is thicker. 2d. that it does not resemble blood in smell. 3d. that it is much darker coloured. 4th. that it never separates into its constituent parts. 5th. that it never coagulates. 6th. that it is not near so susceptible of the putrefactive process.

Our author considers it as a most wise provision of Nature that the uterine vessels, in a healthy state, operate such a change on the lymph of the blood, that it is incapable of coagulation in the womb, otherwise the most serious inconvenience would ensue.

"Having (we trust) rendered it more than probable, that the fluid thrown out at the menstrual period is the product of a secretory process ; and that this process is instituted with the view to deprive the coagulating lymph of the power of coagulation ; and that when this secretion is healthily performed this end is uniformly effected ; let us advert to the consequences that would follow, supposing that, from some cause or other, an interruption is given to this healthy condition of the uterus : it would seem, under such circumstances, to follow as a consequence, that the fluid discharged would differ from the product of a healthy and well-established secretion. The process would be imperfectly performed, and the required changes would not be completely induced, the coagula-

culent on the other ; and this observation is confirmed by my friend Dr. Horner, who kindly examined a portion of it for me.

ting lymph would not be entirely deprived of its usual or common capacity, consequently the menstuous fluid would be imperfectly elaborated; so soon then as this fluid is eliminated from the secretory vessels it will begin to separate into its constituent parts, the colouring matter will separate from the imperfectly subdued coagulating lymph, and will, from its superior density occupy the lower or most depending part of the uterine cavity, and will, sooner or later, make its escape, while the coagulating lymph will remain either altogether or in part to spread itself over the internal face of the womb, and will, as it is wont to do when in contact with living parts, quickly assume the appearance and density of membrane.

This membrane will be, to all intents and purposes, an extraneous substance to the uterus, and will consequently stimulate it to the effort of throwing it off, which will be eventually effected by the institution of alternate contractions; and hence the pain during this process." 161.

This reasoning is ingenious; but what is more interesting is the fact, that Dr. Dewees has found *tinctura guaiaci* an effectual medicine in stimulating the uterus to throw off the deciduous membrane, and prevent its subsequent formation.

19. *Fractured Femur.** The unexpected success, and the equally unexpected disappointments, which Dr. Colles met with in the treatment of fractures of the neck of the femur, induced him, a few years ago, to turn his attention more particularly to this injury. The discrepancy above-mentioned he had endeavoured to account for by dissection, and the result is herewith communicated to the surgical profession, rather as a stimulus to further investigation, than as a basis for any settled rule of practice.

Case 1. Was a *subject* brought to the Anatomical Theatre for dissection, and the history, of course, unknown. The capsular ligament of the hip joint was thicker and closer in texture than natural. The fracture of the neck was near the trochanter, but still within the capsular ligament.

"The fractured surface of the upper piece exhibited many spots apparently covered with a cartilaginous incrustation, which spots, on more close examination, were found owing to the conversion of small portions of the bone into a substance resembling ivory. The lower fractured surface, widely expanded, was formed into a sort of cup, as if the bone had been rendered soft, and, while in that state.

* Fracture of the Neck of the Femur, illustrated by Dissections. By A COLLES, M. D. *Dublin Hospital Reports. Vol. II.*

had been acted upon by the upper piece, which was pressed on it by the weight of the body. One part of the edge of this cup-like surface was formed of two pretty large fragments of bone, which were closely connected to it by a strong ligamentous substance." 336.

The round head of the bone was retained in the acetabulum by the ligamentum teres, and was entire. No intermediate substance held the fractured surfaces in apposition, each being connected with the capsular ligament by very strong ligamentous bands, which passed from the internal surface of the capsule to almost every point of the outer surface of the fractured pieces.

From these appearances, it is obvious that no ossific union had been attempted by nature between the fractured bones, and that the stability of the limb had depended upon the strength of those ligamentous bands by which each piece was connected with the capsular ligament, aided, no doubt, by the extraordinary thickness which the capsule had acquired.

Case 11. The following appearances were observed in the left thigh of a female corpse. Left femur fractured transversely, on a level with the brim of the acetabulum.

"Two strong ligamentous bands, one arising from the edge of the acetabulum, and the other from the internal surface of the capsular ligament, stretched across to the broken surface of the head of the bone, and seemed as if they had assisted the round ligament in confining the head in the socket. The head of the bone was perfectly sound, as was the ligamentum teres. The two surfaces of the fracture anteriorly admitted of a separation from each other to the extent of an inch, having, at this part, no other connexion than two or three tendinous bands, nearly an inch long, and very distant from each other. Posteriorly these surfaces were united together by a very strong ligamentous substance, which was so connected with the capsula that it appeared as if it were formed by the ligament sending a thick production across between the fractured surfaces. The neck of the femur was evidently shortened." 338.

Eleven cases are related by Dr. Colles all interesting in themselves, but too long for analysis here. We shall subjoin a few remarks with which our author closes the paper.

"It is very plain that a fracture may take place either near the edge of the acetabulum, or in any part of the length of the neck of the femur, and also that a fracture may take place close to the capsular ligament, and yet exterior to it. The efforts of Nature to repair the injury are independent of the seat of the fracture, and yet they present varieties which have hitherto been overlooked. Thus, in the two first of the foregoing instances, the broken surfaces moved on each other, and were converted into a state approaching to ivory.

No attempt had been made to unite the fracture, and the pieces of bone were held in apposition only by new ligamentous productions from the capsular ligament, which are inserted into the external surfaces of each piece." 352.

The circumstances which Dr. C. found common to all these fractures were, that the capsular ligament was not lacerated—and that in every instance, the capsule was increased in thickness. Another circumstance attending these fractures, was the removal of all, or the greater part of the neck of the femur, a fact which has been long since observed, but not yet fully explained.

20. *Luxation of the Thigh, in the superior anterior direction.** This rare species of luxation occurred from the fall of a horse on his rider, and is related by Baron Larrey. The attendant phenomena were, limb separated to nearly a right angle from its fellow, and turned in on the pelvis—foot and knee turned outwards, a deep hollow occupying the place of the trochanteric projection—head of the femur projecting under, and stretching the crural vessels of the inguen—the whole limb swelled, spotted, and immoveable, with sense of numbness, coldness, and excruciating pain in the groin and belly. After several ineffectual efforts at reduction, Baron Larrey reduced it himself by suddenly raising with his shoulder the lower extremity of the femur, while with both hands he depressed the head of the bone, which rested before the horizontal portion of the pubis. Inflammation of the joint, with retention of urine, pain in the groin and limb, fever, &c. followed. but were reduced by local bleeding, cataplasms, and the employment of the catheter. The limb remained somewhat longer than the other, when the patient was horizontal, not when erect.

21. *Tabes Mesenterica.†* The symptomatology and pathology of this disease are pretty well known. Chance suggested to Dr. Fletcher a mode of treatment which, in his hands, has proved very successful. It is simply this: after removing the causes, as much as possible, on which the disease depends, a dose of some cathartic medicine is given

* Bulletins of the Fac. of Med. No. 1.

† On Tabes Mesenterica. By Dr. J. FLETCHER. *American Medical Recorder*, Vol. I

every day, or every second day, making use at the same time of a tepid bath, twice a day, for 15 minutes each time, composed of a strong decoction of green black-oak bark (*quercus tinctoria*) and clothing the patient well in flannels, if the season require. In pursuing this plan eight or ten days, he always found an evident amendment, and in six or eight weeks, a perfect cure. Several cases are detailed in corroboration, where the tumid abdomens were quickly reduced by this treatment, and the general health restored.

§ IV. NERVOUS SYSTEM.

22. *Inordinate Irritability.** Every experienced surgeon must have met with instances where the inordinate sensibility of patients prevented them from undergoing necessary operations, even after they had been commenced. A mean of lessening this irritability is therefore a desideratum, and Mr. Wardrop proposes *venesection ad deliquium animi* as the measure, founded on the following case.

"A young woman of robust form, had a tumour on the orbital plate of the left frontal bone, the base adhering firmly to the bone, whilst the exterior portion was attached to the integuments, in which there was a small sinus leading into the interior of the tumour. The diseased mass did not exceed the bulk of an almond, but it was attended with great pain, and even cautiously touching the orifice of the sinus with a probe, excited violent irritation."

Several attempts were made to extirpate the tumour, but in vain; the moment the scalpel touched the integuments her struggles were invincible. Mr. Wardrop a few days afterward, had her bled in a warm room, from a large orifice. Fifty ounces of blood were abstracted before syncope ensued "which lasted a sufficient time to allow the tumour to be removed." "When the fainting went off, she would not believe that the operation had been performed, until she examined her face in a glass."

She remained pale and feeble for a few days, but "she rapidly recovered her wonted strength without in any way appearing to have suffered from the loss of blood."

* Some Observations on a mode of performing operations upon irritable patients, with a case, where the practice was successfully employed. By JAMES WARDROP, Esq. Surgeon Extraordinary to the Prince Regent. *Medico-Chir. Transactions*, Vol. X.

While we admire Mr. Wardrop's resolution in having recourse to the foregoing measure, we should not be inclined to follow his example. A few years ago, we had an opportunity of seeing a fatal syncope induced by abstracting a pretty large quantity of blood from a robust young man labouring under severe pulmonary inflammation in measles. From some inattention or mal-adroitness in the assistant, the patient was not laid horizontal immediately when syncope took place, and the consequence was, that the fainting ended in death. Independently, however, of the danger of such a termination of syncope, protracted to the extent of time required for even a very trifling operation, we apprehend that such a temporary quiescence of the circulation would not be very unlikely to produce coagulations of the fibrin of the blood, that might ultimately embarrass the function of the heart. We throw out these hints merely as cautionary ones; indeed, Mr. Wardrop himself states, that "it has not been his intention to recommend this mode of practice for general adoption." We cannot, however, entirely agree with our author, "that were circumstances equally urgent to suggest its employment, it may be ventured upon fearlessly."

§ V. VASCULAR SYSTEM.

23. *General Inflammation of the Arteries.** The Sieur Bach, of sanguineous temperament and tall stature, entered into the military service at the age of twenty, having previously enjoyed excellent health. During the next five or six years, he was exposed to great fatigue and all the vicissitudes of the seasons. Having retired from the service at the age of 27, he was seized the succeeding autumn, with acute rheumatism in the joints of the lower extremities, which was cured by repeated leeching and emollient cataplasms. Seven months afterward, viz. in the month of March, 1816, Bach experienced pain in the epigastrium and between the shoulders, accompanied by a dry and frequent cough. His physicians fearing phthisis, which was hereditary in the family, put him on a strict regimen, which signally mitigated the symptoms above-mentioned. In the month of July, however, they returned in an aggravated degree, accompanied now by palpitations of the heart. All these were again mitigated by

* *Revue Medicale.*



1820.] *Dr. Barde on General Inflammation of the Arteries.* 503

a strict regimen. In March, 1817, a new exacerbation was experienced. The epigastric pain was very acute, and extended to the loins; the action of the heart was violent, and rendered more so by the least exercise—cough very frequent—irregular chills and flushes of heat—feeling of constriction in the epigastric region. At the end of a few days an intense headach, with the developement of fever, of the continued kind—pulse strong, full, and frequent—pulsation of the superficial arteries evident to the view—skin not hot, although the patient experienced a burning heat internally—countenance pale—appetite still preserved, especially for cold victuals and acidulous fruits. Dr. Barde, of Toulouse, now saw the patient, and ordered twelve leeches to the anus, with mucilaginous ptisans and spare diet. This regimen, with reiterated applications of leeches to the fundament, gradually mitigated the symptoms—the patient began to take a little exercise—and in a fortnight, he was able to return to his usual avocations. Still, however, the least fatigue produced oppression, and excited palpitations of the heart, which indeed never entirely subsided. The patient kept himself slightly bent forward, and frequently pressed his hand on the epigastrium, which, he said, rendered the pain more supportable. Stimulating rubefacients to the anterior and posterior parts of the chest gave more freedom to the respiration; and a blister to the left arm, kept open a long time, seemed to reduce a little the action of the heart.

In this state Bach continued till the summer of 1818, when the disorder took on a more alarming character. The oppression at the chest became very great—the cough constant and aggravated by fits—the patient could not lie in bed but in a half bent posture—the pulsations of the carotid, temporal, and radial arteries, were visible at several paces distance; while the action of the heart extended to the epigastrium, which it forcibly elevated at each pulsation.

The frequent application of leeches to the fundament and epigastrium afforded temporary, and only temporary relief. It was remarkable that, even in the height of the febrile paroxysms, the patient appeared pale. Emaciation now made rapid strides. In the night of the 24th October, the patient was seized with a violent chill, succeeded by intense heat, and danger of suffocation. Our author was summoned to him at 5 o'clock in the morning, and bled him immediately from the arm to a considerable extent, which produced a sudden calm. The blood was quickly covered with a thick crust. Two other venesections were practised within a fortnight, which was passed in a state of comparative tranquillity. But on the 18th day, he experienced an attack similar

to the preceding, and was relieved by the same kind of depletion. These attacks, however, were renewed, from time to time, and in the beginning of the year, 1819, his state became truly alarming. Drs. Viguerie and Cabirau were now called into consultation, and the opinion was, that the patient laboured under general inflammation of the arteries. Dropsy now supervened, and the patient was unable to lie down; while syncope was induced by the least motion. He expired on the 6th May, 1819.

Dissection. The cavities of the pleura, pericardium, and peritoneum, contained a considerable quantity of water. The heart was enlarged, and its cavities morbidly dilated. The membrane lining the auricles and ventricles, was of a brownish colour, covered with a mucous substance, and streaked with deep red patches. On removing the mucosities, the membrane underneath was found detached at those points where the red patches were situated. In all the rest of its extent the membrane was observed to be thickened, and so tenaciously adherent to the muscular structure of the organ, that it was impossible to detach it thence. The valves, particularly those of the right ventricle, were infiltrated with a reddish mucosity. The inner membrane of the aorta, carotids and branches, subclavians, brachials and branches, was found thickened, indurated, of a deep red colour, and covered with a whitish purulent matter. Between the internal and muscular coats of the arteries was found a layer of yellow serosity of some consistence. The pulmonary arteries and veins presented similar appearances. The abdominal aorta, also, and all its branches, even to the lower extremities, exhibited the same phenomena on their inner membrane, and between that and the fibrous tunic. The trunks of the two cavæ, from the subclavian veins above, and the abdomen below, participated, in a very high degree, the inflammatory condition of the arteries. Their inner membrane and valves were thickened, red, and easily lacerable. The mucous membrane of the stomach and small intestines was of a reddish colour, and the blood-vessels strongly injected. There were also some marks of inflammation in several other portions of the abdominal viscera.

We have translated this case verbatim, because it is one of the best detailed histories on record of this curious and dangerous affection. Dr. J. P. Frank appears to have been the first who attributed to inflammation of the arteries a peculiar species of inflammatory fever. M. Portal next reported a case of inflammation of the inner tunic of the aorta, in a subject, where the eruption of measles had been suddenly

repelled, and death ensued in a few days preceded by violent sense of suffocation and strong palpitations of the heart. In July, 1819, M. Dolbant presented to the faculty of Medicine of Paris a thesis on arteritis, in which are detailed five instances of inflammation, more or less extensive, of the internal tunics of arteries. Our own countryman, however, Mr. Hodgson, had previously related a few cases of a similar nature. M. Vaidy has reported an interesting case of this kind in the *Journal Complimentaire* for August, 1819. None of those histories, however, are nearly so complete as that of Dr. Barde's which we have here detailed.

Inflammation of the arteries is sometimes developed after the sufferings occasioned by a great surgical operation. The three first cases related by M. Dolbant were of this kind. At other times, however, it takes place without any evident cause, as in the fourth and fifth cases of the same author, and those of M. Vaidy and Barde.

We may remark in conclusion that vascular depletion, in the case here detailed, appears to have been greatly neglected in the beginning; although the symptoms were signally mitigated by it when ultimately put in execution. It is evident that in such dangerous cases the most rigorous antiphlogistic measures can alone offer any chance of saving the patient's life. *Revue Medicale*, No. III. Mai, 1820.

24. *Intermittent Fever.* The difficulty which is often experienced in retaining cinchona on the stomach, in fevers of type, renders it desirable to have substitutes for that medicine. We, ourselves, always employ the arsenical solution in such cases, but many practitioners have an unreasonable dread of this potent substance. Recently two substitutes for cinchona have been proposed—bitter almonds and coffee. Dr. Mylius* employed the former in 27 cases of quotidian and quartan fevers. Two were cured after the second dose—four after the third—nine after the fourth—four after the fifth—four after the sixth—two after the seventh—one after the eleventh—and one after the twelfth. An emetic was generally premised, and the dose of the remedy was ʒiiss. or ʒij. of the bitter almond formed into an eight ounce emulsion, and taken one hour before the access of the paroxysm. No relapse occurred.

Dr. Thomson† relates some cases of intermittent fever cured

* *Bulletins of the Faculty of Medicine*, No IV.

† *Ed. Journal*, 62.

by coffee, in the island of Jamaica. The form recommended is an ounce of dried ground unroasted coffee, infused in a pint of water, and boiled down to four ounces. One ounce to be taken cold three times a day in the intervals of the fever.

Quassia was employed successfully by the same gentleman. The infusion is the most agreeable form; but Dr. T. has several times given it, finely rasped, to the extent of several drachms in the day, and never found it to irritate the stomach. It may be continued during the paroxysms of the fever, which is an advantage over cinchona.

25. *Cutaneous Diseases.** We are afraid that there is too much truth in the assertion of Dr. M. that notwithstanding the classification and graphic delineations of cutaneous diseases, "little has been added to our stock of knowledge regarding their cure." The following is the mode of treatment lately pursued with more than ordinary success by our author.

"The principle upon which I have acted is, that cutaneous eruptions are composed of an infinite number of minute *ulcers*, which, of course, fall to be treated as such, according to the ordinary rules of surgery. From this view it will follow, that all siccant remedies, in whatever shape, are inadmissible, and that the eruptions must be kept open and clean, till the cure is completed. This purpose has been effected by friction, and by, as far as possible, secluding atmospheric air. The means I have adopted are these: I dip a sponge in lukewarm water, and after squeezing it hard, so that only dampness remains, I cover it with oatmeal. With this the parts are rubbed for some length of time, the sponge being frequently dipt in the oatmeal, and this operation is repeated two or three times a day, according to the urgency of itching or other symptoms. After being sufficiently rubbed, the parts are washed and gently dried. Oil is then applied, by means of a varnish-brush, and the parts covered up with slips of linen. I give the preference to oil made from cow-hell, on account of its tenacity, and because it can be constantly and easily procured in a fresh state. During the friction, should a little blood ooze out, the appearance need create no uneasiness, and the consequences are rather favourable than otherwise." 526.

When Dr. Morrison suggests that this treatment should be applied to *variolous* eruptions, in order to prevent the secondary fever, he betrays more of the hobby-horse, than of sound pathology. It may have been useful in what is de-

* Thomas Morrison, M. D. *Ed. Journ.* 65.

†† This paper was placed by mistake in this Section.

nominated psoriasis inveterata, especially when combined, as it here was, with blue pill and ex. colocynth. internally, together with saline aperients.

26. *Obliterated Aorta.** We believe that this case makes the third on record, of obstructed aorta, compatible with life. They go far to establish the general sufficiency of collateral circulation, for the purposes of the animal economy. Facts of this kind serve to increase our confidence in the resources of nature, as well as extend the boundaries of art.

Dr. Goodisson, upon endeavouring, at the HOSPICE DE LA PITIE, to trace the origin of the inferior mesenteric artery, on the body of a female, discovered a hard tumour placed directly upon the line of the aorta, and which was ascertained to be a diseased state of this vessel. The aorta itself, from the origin of the inferior mesenteric artery downwards, together with the greater part of the iliacs, was obliterated. The vessel lay close, and was firmly attached to the spine, flattened posteriorly, but still preserving its convex form in front. There was a large quantity of gelatino-cartilaginous matter surrounding that part of the aorta and vena cava, together with the portions of the iliac arteries and veins, which were included in the disease. Some vegetations were observed on the mitral and tricuspid valves of the heart; but no other material derangement. The aorta, at its arch, was expanded to nearly double its natural size. Internally it was studded with "gross patches of bone," and depositions of ossific matter were seen in different places along the course of the artery. A bony sheath encased the diseased portion of artery for about two inches, and was filled with a firm fleshy substance, resembling heart. The lumbar arteries given off above the obliteration were considerably increased in size, as were the intercostals, forming free inosculations with the mammary, which was also enlarged in calibre. The spermatic arteries were immensely increased.

New Circuit of the Blood. "The mammary arteries were a good deal enlarged, and, like the spermatic arteries, their course was beautifully marked by the serpentine convolutions which they formed. That of the left side was joined by a considerable branch from one of the intercostals at the superior anterior spinous process of the ilium. This branch took its usual course from the aorta, passing

* A Case of obliterated aorta. By THOMAS GOODISSON, M. D. with some additional observations, by Philip Crampton, M. D. Surgeon General, &c. *Dublin Hospital Reports*, Vol. II.

immediately along the external edge of the *psaos parvus* one half of its length, then passing between the *transversalis* and *obliques descendens*, and continuing its course between those two muscles, till, arriving at the before-mentioned point, it joined the *mammary*, (or *epigastric*,) together with a branch of considerable size, passing from between the fourth or fifth lumbar *vertebræ* and another smaller one, which, passing across at right angles, the whole were conveyed together by the medium of the *circumflexa ilii* to the usual origin of this vessel in the external *iliac*." 198.

The general appearance of the body could not be said to indicate disease, and the viscera were all sound, with the exception of an abscess in the lungs, which had burst into the trachea and destroyed life. The lower extremities were full proportioned, and well supplied with blood. No history of the woman's complaint could be traced.

27. *Melancholia cured by accidental mercurial Salivation.**

Dr. Burrows relates an interesting case of melancholia in a woman, 40 years of age, who without any apparent moral causes, became unhappy, fanciful, and nervous, being dyspeptic in consequence of a sedentary life. She became persuaded at length that she had hernia. This was the predominant hallucination, and ended in an attempt at suicide, by precipitating herself from a window at a great height. The contusion sphacelated, and the discharge was profuse. During convalescence from the injury, and while the mental hallucination continued, an accidental mercurial ptyalism took place, from some calomel and squills exhibited as a diuretic. "Concurrent with this ptyalism was an amelioration of the mental disorder. She grew more cheerful, and every aberration by degrees vanished." She married afterward, "but neither the joys, nor the hopes, nor the pains, nor the disappointments of the marriage state have deranged the equanimity of her intellectual faculties."

Dr. Burrows saw a similar result in two or three other instances of insanity; but wisely cautions us against drawing any precipitate conclusions from these cases, though they may afford us a valuable hint on some occasions.

"The physical phenomena exhibited in insanity indicate, generally, a marked derangement of the vascular as well as of the nervous system. There is the plainest evidence, sometimes of increased, sometimes of decreased arterial action; and when the equilibrium of

* Dr. G. M. Burrows. *Med. Repos.* Oct. 1820.



the circulation is disturbed, the sensorium sympathizes, and the functions of the intellectual organs are often implicated.

“Mercury, by its acknowledged power of equalizing the circulation, may restore the balance between the vascular and nervous systems, and thereby remove that morbid condition of the brain, which, perhaps, originates intellectual derangement. The theory of the operation of mercury on the system, therefore, favours the presumption, that salivation induced by it, may terminate insanity, while no such expectation could be formed from spontaneous salivation.—*Med. Repos.* p. 278.

Dr. Burrows has repeatedly given mercury as an alterative, in insanity, where the functions of the digestive organs were faulty, and he thinks with advantage; but always in combination with other pharmaceutical remedies. He has since tried it constitutionally.

“But, including the three cases referred to in this paper, sanity has followed four times only in nine cases where mercurial salivation has been accomplished. My experience, therefore, of artificial salivation in intellectual disorders is still much too limited to speak confidently of its success. Yet enough perhaps is ascertained to encourage a more extended trial of it; and this I shall not omit when opportunity offers.” 279.

These observations are valuable, as any from Dr. Burrows must always be.

§ VII. MEDICINAL AGENTS.

28. *Poisoning by Oxyurias Hydrargyri.** A lady, recovering from puerperium, swallowed by mistake, a lotion containing thirty grains of corrosive sublimate, and quickly felt a burning sensation in the stomach. She immediately irritated her throat with the finger, and threw up some fluid. Dr. Thomas was with her in a minute or two; but having a recollection that liver of sulphur was considered the best antidote for the poison in question, he posted off himself for a surgeon, and *three quarters of an hour* elapsed before they returned to the patient! An emetic of ipecacuan was now administered, and its action promoted by warm water, &c. In short, the woman recovered, but evidently more by the powers of Nature, than by the assistance of art. We are quite amazed how a physician could think of leaving a poisoned patient for three quarters of an hour to search for liver

* By CHARLES THOMAS, M.D. *Ed Journ.* No. 65.

of sulphur, without flying to other antidotes nearer at hand, as eggs, milk, gum-water, sugar and water, or even water itself, if none of the above were within reach. Surely this case is a sufficient commentary on what we last quarter said respecting the propriety of having a *toxicological chart* hung up in every medical man's house. No man can answer for his presence of mind on these occasions; nor should he trust to memory alone. Let him have the *litera scripta* ready to refer to, and then if he fails, he will have the consolation of having done what was right without delay.

29. *Mercurial Ointment*.* Dr. Dean and some other American practitioners have lately been a good deal in the habit of employing the strong mercurial ointment, as an external application in severe cases of erysipelas. When inflammatory symptoms are urgent, they, of course, use depletory measures, and in all cases attend to the functions of the chylipoetic viscera, viewing the disease as, for the most part, dependent on derangement of the digestive organs. It is only as a useful auxiliary measure that the ointment above-mentioned is employed. "It is to be freely rubbed into the parts occupied by the erysipelatous inflammation, and the limbs afterward enveloped in fine linen cloths, upon which some of the ointment has been previously spread. This process is to be repeated twice or thrice a day." A few hours after the first application of the ointment the patient expresses much relief from the burning pain, heat, and itching. Upon a farther continuance of the remedy, the eruption usually ceases to spread, and assumes a more favourable aspect. The inflammation soon after subsides, and with it the general irritation of the system. Erysipelas is a disease very common in America, and therefore the above suggestion of our transatlantic brethren deserves a trial in this country.†

30. *Infusum Digitalis*.‡ "In acute diseases generally," says a zealous brother labourer in the field of medicine, "my trials of it do not offer many temptations to extend its

* Dr. A. T. Dean, *American Medical Recorder*, July, 1820.

† We understand that in some fatal cases of erysipelas which occurred lately in St. George's Hospital, the internal coats of the blood-vessels were found inflamed.

‡ A practical physician.

employment; though in chronic affections, it often accomplishes all that can reasonably be expected from medicine." In reading the case to which these remarks are subjoined, I was struck with the patient's expression at the time he was taking an ounce of the infusion every fourth hour. "Take care!" said he, frequently, in a hurried yet cautious tone. He expired on the same day.

I should not have been struck with this expression, had it not happened, that I lost two patients about three years ago during the exhibition of this medicine: and although I was prescribing it within authorized limits, I mean the limits set to its exhibition by posological writers, my patients died under such suspicious circumstances, that I wrote the word "Cave!" under the pharmaceutical or posological mention of *Digitalis*, in that form, in every work in my possession. In one of the cases I had ordered only half an ounce every six hours; it was taken regularly during three days;—in the other, an ounce every eight hours, during two days; both cases were hydrothorax. No specific action was manifested on the heart, the stomach, the bowels, or kidneys, in either case, during the exhibition of the infusion; but both patients died suddenly in getting out of bed.

I cannot help considering the formula of the college too strong, although copied from Dr. Withering; by whom *Digitalis* was prescribed with an efficacy that entitles his authority to our special deference. But to do justice to that physician, we shall keep in mind that he says, "one ounce of this infusion given twice a day is a medium dose. One and all of us, I suspect, when hard pressed by increasing disease, have incautiously exceeded in frequency the exhibition of this form of *Digitalis*, at least once in our lives. In a letter from Dr. Withering to Dr. Woodville, complaining of Dr. Letsom's incautious use of it, in the eight fatal cases recorded by Dr. L. in the Medical Memoirs, he says, "I am fully satisfied that had I prescribed it, as he has done, the effects, in my hands, would have been equally useless and deleterious."

These remarks are calculated to induce caution, without destroying confidence, in this overpowering remedy, so highly extolled by all writers of the present day on hydrothorax.

A PRACTICAL PHYSICIAN.

We have long been in the habit of employing the *infusum digitalis*, especially in dropsical affections, but we rarely exceed half a fluid ounce every eight hours. Dr. McLean seldom exhibited more than two fluid ounces in the day, and few physicians had more experience than he. *Rev.*

X.

*Retrospective Review of the Improvement of Medical and Surgical Science in the United States, during the last thirty years.**

"A RETROSPECT of the improvements in medical science, in our own country, during the last thirty years, cannot, it is presumed, be considered uninteresting. To look back occasionally, on the scene over which we have passed—to contemplate the progress we have made—is indeed not only interesting, but highly useful.

"In such a retrospect, however, we cannot hope, always, to trace with precision the silent and gradually progressive steps of scientific improvement; for conspicuous facts and remarkable discoveries are not the only sources from which improvement in science derives its impulse. With the gradual, but imperceptible progress of the human mind towards perfection, science moves slowly forward in the path of improvement, without our being able to point out, with definiteness, whence its momentum is derived. Facts and observations, also scarcely appreciable in their separate and isolated state, acquire importance, and become obvious in their influence, only when, in process of time, they are brought into association and comparison with others. Nor can we pretend always to indicate with clearness the full of value of what may be deemed the more important facts or discoveries; for, although we may see the bright lights occasionally set up in the dominions of our science, yet we cannot follow those infinite irradiations which they send into the obscurities of nature, and which contribute, though almost insensibly, to develop her secrets.

"Such are the general difficulties naturally connected with our task. But there are also others to be encountered, of a peculiar character, in giving an account of the improvements of American science. For such is the constant intercourse between this country and Europe—so rapidly is the light of improvement reflected from one country to the other—and so readily are the sparks elicited in the one, caught and nursed into light in the other, that it is often extremely difficult, and sometimes impossible, to say, with positive assurance, to which the credit of original improvement belongs.

"Medicine has been cultivated with much zeal and success in America within the period of our retrospect. A free, active, and enterprising spirit of inquiry, and an independence of the doctrines and authorities of European writers, characterizes, in an especial manner, the medical mind of our country. 'This hemisphere,' it has been truly said, 'is the theatre on which the prejudices and

* *American Medical Recorder*, Vol. II. October, 1819. The English reader must bear in mind that it is the *American Reviewer* who speaks in this article.

errors of the European schools, in a great variety of instances, have been refuted and abandoned, and on which new principles in medicine have been proposed, ascertained, and completely established.'

"In noticing the progress of medical improvement in the United States, our view is necessarily directed, principally, to the University of Pennsylvania. For this institution may with propriety be denominated the *punctum saliens* of medical science in America. It is to the free and independent spirit of inquiry, which some of its eminent teachers have manifested, in the pursuit of medical science, as well as to the equally bold and unrestrained spirit of investigation, which for many years characterized the pupils of this institution, that we are to look for almost every thing that is valuable in the improvement of American medicine.

"Previous to about the year 1790, the doctrines and principles generally entertained by our physicians were European. The systems of Boerhaave and Cullen were almost universally adopted among us. In the remediate treatment of diseases, however, American physicians, although entertaining the pathological sentiments of European writers, early found themselves obliged to strike out new plans of cure, or to pursue the modes of treatment proposed in the books, with a boldness and energy corresponding with the more rude and vigorous features of our native diseases.

"Dr. Rush was the first physician who promulgated an American system of medicine. This system, which was at once bold, plausible, and novel in its views, forms an important epoch in American medicine. It gave a national character to the medical science of our country. 'It rejects,' to use its author's own words, 'the nosological arrangement of diseases, and places all its numerous forms in morbid excitement, induced by irritants acting upon previous debility. It rejects, likewise, all prescriptions for the names of diseases, and by directing their applications wholly to the forming and fluctuating state of diseases, and the system, derives from a few active medicines all the advantages which have been in vain expected from the numerous articles which compose European treatises upon the *materia medica*.'

"Whatever we may now think of this system, in all its parts, it cannot be denied that it embraces many important and profound views, which, before its promulgation, were but dimly seen, or altogether unknown. By it, we have been taught a more just and simple doctrine concerning the radical and general relation of diseases, as well as a more rational estimate of the importance of nosological arrangements. That the doctrines and opinions taught by this illustrious benefactor of our science have descended with him into the tomb—that they are the mere meteor lights of fancy, which have passed away with the mind from which they flashed, few, we presume, will allow, notwithstanding the sentence of oblivion pronounced against them by his biographer, Dr. Caldwell.

"Among the most important improvements which have been introduced into medicine in America, may be reckoned the more accurate and rational views entertained at the present day, concerning

the origin and causes of epidemic diseases, as well as a more correct estimation of the effects and value of quarantine regulations.

" Drs. Rush,* Miller, Physick, Caldwell, Mitchill, and Pascalis, deserve to be particularly noticed, for having improved our notions concerning these subjects. The two former, especially, have thrown much light on the origin and character of the yellow fever of this country, and of epidemic and pestilential diseases in general. The monster contagion was in this country divested of his terrifying aspect, and his powers shown to be less dangerous and universal, than they were at one time supposed to be.

" Besides the improvement of our knowledge concerning the general character of diseases, and their intimate relations, many important diseases separately considered have been more thoroughly investigated, and their nature and treatment more correctly ascertained.

" The nature and treatment of dropsical complaints, are, at present, much better understood than they were formerly. Dr. Rush has the merit of having first advanced correct views and principles concerning the pathology and treatment of these diseases. He removed them from the class cachexia, and placed, them very justly, with febrile diseases. He showed, by a train of incontrovertible argument, that dropsy is a disease attended by morbid excitement, and preternatural action of the arterial system. This view of hydropic diseases deserves to be regarded as forming a very important improvement in modern pathology. The mode of treatment deducible from it, is at once more rational and successful, and the sentiments as well as the practice of our illustrious countryman, in relation to this disease, are daily becoming more prevalent, both in Europe and in America.—It may be remarked, however, that while these improved views are becoming more common in Europe, the sources, whence they are immediately derived, are not duly recognized. Dr.

* " In the *Dictionnaire des Sciences Medicales*, tom. xv. page 546, in the article '*Fièvre Jaune, est elle contagieuse?*' written by Fournier and Vaidy, we meet with the following extraordinary paragraph: '*B. Rush avoit d'abord cru que la maladie étoit contagieuse: il a soutenu, depuis 1802, une opinion contraire. Mais ce medecin a déclaré, en mourant, qu'il avoit en cela cédé à des considérations particulières, et qu'il n'a jamais cessé de croire que la fièvre jaune est contagieuse. Il a désaroué à son heure supreme, tout ce qu'il avoit écrit en faveur de la noncontagion. Nous tenons cette anecdote de témoins dignes de foi, parmi lesquels il suffit de nommer M. Moreau de St. Méry.*'—B. Rush believed at first that this disease is contagious. Since the year 1802 he advocated a contrary opinion. But he declared on his death-bed that he did so from private considerations and that he had never ceased to believe in the contagiousness of yellow fever. He disavowed, in his last moments, all that he had ever written in favour of non-contagion. We derive this anecdote from undoubted testimony, among whom it is sufficient to mention M. Moreau St. Méry.' *Credat Judæus!* This scandalous and ridiculous falsehood needs no formal refutation. Here in America we know it to be untrue, the testimony of M. de St. Méry to the contrary notwithstanding.

Abercrombie* of Edinburgh, in an essay on the use of blood-letting in certain dropsical affections, proposes to prove, what no American physician doubts, 'that dropsy is often found existing in a state of the body directly the reverse of exhaustion, and even in immediate connexion with symptoms of an inflammatory nature; in other words, he sets out to prove, what Dr. Rush had long before proved much more ably, that dropsy is a disease, generally, if not universally, attended with *'morbid excitement and preternatural action of the arterial system.'* The name of Rush is not once mentioned by Dr. Abercrombie, notwithstanding the pains he seems to have taken, in hunting up isolated facts and authorities, among the older writers, in support of the sentiments he delivers. In a review of Dr. Parry's elements of pathology, in the 58th number of the same Journal, the credit of removing dropsy from the class cachexia, is given to Dr. Blackall, without referring to Rush, to whom alone, this credit rightfully belongs—'We regard it,' says the reviewer, 'as no mean triumph of modern pathology, that dropsy is removed from the class cachexia, that it is no longer considered as the product of depraved solids, but a disorder of the sanguiferous system. The researches of Dr. Blackall, a few years ago, and existence of albumen in the urine in many cases of idiopathic dropsy, have opened the minds of the profession to a belief of its general alliance to inflammation.' The instances, however, of European writers, availing themselves, without due acknowledgments, of the suggestions and improvements of American physicians, are by no means few. We shall have occasion to notice several glaring ones, in the course of this paper. The following is another example: 'I have not used,' says Dr. Duncan, in an account of the late epidemic fever in Scotland, 'Cullen's distinctions of synochus and typhus, because, I do not believe that the distinction exists in nature. I have preferred distinguishing the cases by the epithets, *cephalic, pulmonic, gastric, enteritic, hepatic, &c.* from the principal organs affected.' This nomenclature was long ago proposed and adopted by Dr. Rush. Dr. Duncan does not give him credit for it.†

"Among the late general improvements of medical science, effected principally in this country, may be mentioned a more simple and efficacious treatment of pestilential diseases, and a more discriminating, rational, and decisive employment of the remediate articles, and especially of blood-letting in febrile diseases.

"Mania a potu, has lately been treated in a new and successful manner with emetics, by Dr. Jos. Klapp. From an experience

* Edinburgh Medical and Surgical Journal, No 55, 1818.

† We can pretty confidently assure the American Reviewer that the silence of British writers respecting American medical literature, is *not* a studied one. Transatlantic works have had no circulation in this country to speak of, and the interchange of Journals has hitherto been but very imperfect. We hope we shall remove this cause of complaint in future.—*English Edit.*

sufficiently extensive, to warrant a comparative estimate, we cannot doubt of the superior efficacy of this mode of treatment. This usefulness of emetics in mania a potu, would seem to go considerably towards confirming the correctness of the gastric pathology of certain mental and cephalic diseases, a pathology which has of late gained much ground in Europe, and in some degree, in our own country. That the primary irritation of this class of disorders does often consist in *functional* or organic derangement of the chylopoetic viscera, there can be no doubt. In this country, these pathological views are perhaps too much neglected. Dr. Chapman, however, with an enlightened discrimination has given due weight to the gastric pathology of mental and cephalic diseases, and has contributed much to the dissemination of these sentiments among us.

"The successful application of the tincture of guaiacum in dysmenorrhœa, as recommended and practised by Dr. Dewees, deserves to be noticed among the improvements of practical medicine. By the use of this remedy, the membrane formed on the internal surface of the uterus in this disorder, and which causes difficult and painful menstruation, as well as sterility in the married woman, is expelled, and its subsequent formation prevented, and the pain and barrenness which arose from its presence obviated.

"Surgery has received numerous and important improvements in the United States. It is practised here, perhaps, in a more perfect state than in any other country. 'The American surgeon, says Dr. Dorsey, 'is, or ought to be, strictly impartial, and therefore adopts from all nations their respective improvements.' Whilst the value of the doctrines of adhesion are fully understood with us, which is not the case with the French, the improvements of French surgery, neglected by the English, receive here an equal attention.

"Dr. Physick has contributed largely to the improvement of surgery. Indeed there are few subjects in this department of the healing art, that have not received some favourable modification from him. What has been said of the poet, may with the utmost propriety be repeated of this gentleman, in relation to surgery, *nihil tetigit quod non ornavit*.

"In the modification and invention of surgical instruments, many valuable improvements have been made in America. Dr. Physick's improvement on the gorget is important. It consists in having the beak and blade formed of two separate pieces, and so constructed as to be readily and firmly united. By this contrivance the blade may be separated from the beak, and a perfectly keen edge given to that part of it which commences the incision, an advantage which cannot be gained when the beak and blade are inseparable. This is obviously an improvement of much value. For a particular description, see Dorsey's Surgery, vol. ii. page 175.

"The French mode of treating fractures has been generally adopted in this country, so far, at least, as relates to the use of permanent extension and counter-extension, for the purpose of keeping the extremities of the fractured bone in opposition. Important modifica-



tions, however, in the modes of keeping up extension and counter-extension in fractures, have been made in America.

"The long splint of Desault, used in fractures of the thigh, has received a useful modification from Dr. Physick. The improvement consists in increasing the length of the splint, so that the counter-extension is more in the direction of the thigh.

"In oblique fractures of the leg, a very convenient and effectual mode of applying permanent extension was contrived by the late Dr. James Hutchinson. This is an improvement of much value in the treatment of fractures of the leg. For a particular description of this splint, and its mode of application, see Dorsey's *Elements of Surgery*, vol. i. p. 178.

"An apparatus for applying permanent extension and counter-extension, in fracture of the thigh, has also been invented by Dr. Hartshorne. By this contrivance, the extension and counter-extension are made by a splint placed on the inside of the leg, reaching from the perinæum to about six inches below the foot. The upper extremity is cut out like the top-piece of a crutch, which is lined and stuffed with hair. This part, resting upon the perinæum and ischium, serves as a support to the counter-extending force. The lower extremity does not differ from that of Hutchinson's splint.*

"The angular splints, used by Dr. Physick in fracture of the os humeri, at or near the condyles, to prevent a deformity which is extremely apt to occur in these cases, is also an improvement deserving notice. Dr. Physick has ascertained that the same advantage may be more certainly obtained, by keeping the patient in bed, with the arm flexed at the elbow, and lying on its outside with the rectangular splints supported by a pillow.†

"Surgeons have complained of the difficulty of turning a needle, when introduced into deep and narrow wounds for the purpose of taking up deep-seated arteries. To obviate this difficulty, Dr. Physick has introduced the use of an instrument which completely answers the purpose. It consists in a curved forceps, by which the needle is held, and thus rendered perfectly manageable. Heister describes an instrument for holding needles in making sutures. Dr. Physick, however, was the first surgeon who proposed and used such an instrument, *for the purpose of taking up deep-seated arteries*. In the *Eclectic Repertory*, a modification of this mode of holding the needle in taking up deep-seated arteries, is described by Drs. Parish, Hewson, and Hartshorne. These gentlemen have forgotten to mention Dr. Physick as the *first* surgeon who used such an instrument for this purpose. Dr. Physick's improvement was made in 1800.

"Blisters, when locally applied to a part in a state of mortification consequent to inflammation, will generally put an immediate stop

* Hartshorne's Translation of Boyer on the Bones, page 365.

† Dorsey's *Elements of Surgery*, vol. i. page 169.

to its progress. This very important remedy was introduced into practice by Dr. Physick. He first employed it in 1803. The blister should be large enough to cover all the sound parts in contact with the diseased. 'I have witnessed its effects,' says Dr. Dorsey, 'in a variety of instances, and have no hesitation in recommending it in preference to all other local remedies. After the first dressing of the blister, it will generally be found that the mortification has ceased to progress, and in a short time the separation of the sloughs commence.'

"Dr. Physick's mode of treating artificial anus is unquestionably one of the finest improvements of modern surgery. This mode of treatment consists in consolidating the sides of the intestines laterally, for a short distance below the artificial opening. To effect this union a ligature was passed by Dr. P. through the intestine, and suffered to remain a week, keeping its side in close contact. A portion of this consolidated partition between the two extremities of the intestine was afterward removed by a cutting instrument, the faces thus regaining their natural route, the external aperture was sealed up without difficulty. This important improvement is claimed in France by Dupuytren;* and in Germany, where it is spoken of as a most valuable improvement, it is also given to this surgeon. Dr. Physick, however, performed this operation in January, 1800, successfully, long before Dupuytren's case occurred.†

* Anzeig. einer operations weise zur heilung des *anus artificialis*, nebst bemerkungen von Dr. Resinger.

† Upon this subject, it gives us pleasure to be able to introduce the following letter from our friend, G. S. Pattison, Esq. late professor of anatomy, physiology, and surgery, in the Andersonian University, Glasgow.

"DEAR SIR,

Pine-Street, Aug. 28, 1819.

"In compliance with your request, I now transmit you an account of the method adopted by M. Dupuytren of Paris, for the cure of artificial anus.

"In most cases of artificial anus, the superior and inferior portions of the wounded gut are connected with each other at the external wound: they, in fact, as it has been aptly said, lie along side of each other, like the tubes of a double-barrelled gun. The rationale of cure proceeds upon this their locality. 'All that is required,' says the French Surgeon, 'is to open a lateral communication between the different portions of the intestine; if this be done, it is evident that the *feculent contents* will pass with greater facility through that opening, and descend, *per vias naturales*, than overcome the stricture of the wound, and be discharged externally.' The operation which this gentleman performs for the accomplishment of the cure, has two intentions. 1st. To make a direct opening of communication betwixt the superior and inferior portions of the intestine. 2dly. To guard against *feculent effusions* into the abdomen. It is performed by introducing separately into the different portions of the gut, the blades of forceps, which have a considerable resemblance in shape to those which are used for the extraction of bullets. So soon as these have been united at the hinge, and it has been ascertained by the finger that the blades grasp the inside of the intestines immediately in-

"The application of blisters to the tract of an inflamed vein, is a practice of much value. This treatment was first introduced by Dr. Physick. 'A small plaster of simple cerate, spread on linen, is to be applied on the orifice, and over this a blister is to be laid large enough to cover the whole inflamed part, extending three or four inches from the orifice in every direction.'

"In cases of retention of urine, it is often impossible to introduce a catheter, although a bougie may be introduced without difficulty. A case of this kind having occurred to Dr. Physick in 1796, he fastened the point of a bougie upon the extremity of an elastic catheter, and thus very readily passed the instrument, which he had previously attempted in vain. 'For this purpose, a French catheter of the middle size is to be provided, and its point cut off, leaving a continued cylindrical canal through it. A piece of bougie plaster between two and three inches long is to be cut into a proper shape, forming a triangular piece, the base of which is about one inch and a quarter, and the height about three inches. When it is rolled up, as in making bougies, sufficiently to fill the cavity of the catheter, a slit half an inch long is to be made in its lower end, after which the part already rolled up is inserted into the catheter, and the other half is wrapped round its outer side, and fastened by tying a cambric thread neatly round it. In order to secure still more effectually the bougie point from slipping off, and to extract it, in case this ac-

terior to the external opening, they are pressed so forcibly together as to destroy the vitality of all the parts embraced betwixt them. The forceps are now withdrawn, and Nature finishes the cure. The manner in which she accomplishes this will be easily understood. The pressure having destroyed the life of all the substance placed betwixt the blades of the forceps, it must necessarily be separated from the living parts: it must slough off: and as a certain degree of inflammation is required before this can happen, the parts surrounding, from their being covered with serous membrane, are glued together by coagulable lymph, and effusion prevented.

"With all other European surgeons, I believed, until my arrival in the United States, that this method of cure, which I consider one of the most philosophical and beautiful discoveries in modern surgery, was first introduced into practice by M. Dupuytren, of the Hotel Dieu. Indeed, I have in a work on the surgical anatomy of the trunk, which I have been for some time preparing for the press, so considered it, and given the due meed of praise to him, who I then considered its author. I have since learned to whom the discovery belongs, and I can assure you that it will be a pleasing task for me to correct what I have written, and to publish an account of Dr. Physick's operation, which is essentially the same as the one performed by the French surgeon, and which, from its having been performed many years before in a public hospital, and continued to be taught session after session in a medical university, gives unquestionably all the honour of this great improvement in surgery to the HUNTER of America.

"I remain, dear sir, yours most truly,

"GRANVILLE SHARP PATTISON.

• TO DR. EBERLE."

cident should happen, a strong thread is passed through the bougie, and fastened to the outer extremity of the catheter.* This is very justly considered as one of the greatest improvements which the catheter has received in modern times.

"In false joints from fracture, Dr. Physick has introduced the practice of passing a seton through the diameter of the limb, between the two fragments of the bone, in order to inflame their extremities, and thereby to produce a reunion of the fractured bone. There is some dispute relative to the origin of this important practical improvement. Boyer, Roux, and a few other French authors, have by an ambiguous notice of this practice, conveyed, or evidently wished to convey, in impression that the merit of first introducing this improvement into surgery is due to Mr. Percy. Boyer and Roux, who quote from Laroche, state, that 'Percy performed this operation two years before Dr. Physick's operation was known in France.' This does not, however, prove, though it insinuates, that Percy was the first who performed this operation. For to say that an operation was performed by one surgeon, two years before he knew that another surgeon had performed a similar operation, does certainly not establish the priority of invention to the former. Both Boyer and Roux, moreover, express themselves with so much ambiguity on this subject, as to render it evident, that they themselves did not view Percy as preferring a just claim to the merit of introducing this valuable improvement. 'On pourroit, peut-être, réclamer,' says Roux, 'la priorité de l'invention en faveur de M. Percy.' But Laroche, from whom Boyer and Roux take their account of this operation, gives the credit of first using it to Dr. Physick. He states, also, that Percy did not perform this operation with the express purpose of producing a reunion of the fractured extremities, but simply to facilitate the discharge of dead bone; and he adds that having seen setons used after gunshot fractures, to favour the escape of dead pieces of bone, he is astonished that he or his master never took the hint of applying this practice to the cure of artificial joints.

"In cases of retention of urine from stricture, where every attempt to introduce a catheter fails, surgeons generally recommend puncturing the bladder. To avoid this formidable operation. Dr. Physick contrived an operation, which he has repeatedly performed with success. It consists in perforating the stricture by an instrument consisting of a curved cannula, or catheter, concealing a lancet capable of being protruded when necessary. 'The operation is to be performed, by introducing the instrument as far as it will go, and then the lancet is to be protruded. In some cases the obstruction is situated beyond the bend of the urethra; and in these cases, in order to guard against all danger of wounding any other parts except those intended, the handle of the instrument is to be depressed as low as possible; and when it is pushed onward, it will be found to have divided the stricture, and urine will generally escape through

* Dorsey's Surgery, vol. ii. p. 162.

the cannula. The lancet is immediately to be retracted, and the urine evacuated. A catheter must afterward be introduced, and left in the bladder until the new passage heals up. This very important operation has been repeatedly performed by Dr. Physick, and has never been followed by any unpleasant consequences.*

"Dr. Physick's armed bistoury, for the operation of fistula in ano, is also an improvement of considerable value. 'It combines, in a great measure, the advantages of the blunt and sharp-pointed bistouries, and possesses some advantages over both.'†

"In the reduction of dislocation of the thigh, Dr. Physick has also contrived a very effective mode of making extension and counter-extension. For a particular account of Dr. Physick's mode of applying the extending and counter-extending forces in dislocations of the thigh, see Dorsey's Surgery, vol. i. p. 260.

"The use of copious bleeding, in facilitating the reduction of luxations, though originally proposed by Dr. A. Monro, was first put into practice in our country by Dr. Physick. This eminent surgeon has also directed the attention of surgeons more particularly to making the counter-extension against the acromion process in the reduction of dislocations of the shoulder joint.

"In consequence of having remarked that strips of adhesive plaster applied over ulcers were soon dissolved in the pus discharged from them, Dr. Physick suggested, many years ago, the use of animal ligatures, for the purpose of taking up arteries. 'For as it is now sufficiently ascertained that all the processes requisite for the obliteration of a blood-vessel secured by a ligature are completed in a very short space of time, probably in two or three days, it follows, that if the ligature applied be made of materials capable of securing the vessel during this space of time, and liable to decomposition and solution in the animal fluids afterward,' much advantage would be gained. Dr. Physick proposed the use of leather for this purpose; and in an experiment made in 1814, with a buck-skin ligature, applied to the large artery of a horse, it was found to afford all the advantages for which it was suggested. 'It restrained the bleeding, and was discharged in a liquid state in two or three days.'

"Dr. Physick's mode of treating *morbis coxarius* deserves to be mentioned in this place. He advises the application of a curved splint to the hip, in order to secure the perfect rest of young patients, which without such a contrivance, it is almost impossible to do, and which is of the utmost importance in the cure of this disease. Active and long purging, together with a low diet, make up the rest of the treatment.

"It has long been a question of much difficulty, with surgeons, why inflammations so readily take place in cavities that are laid open to the admission of the external air. Hunter ascribed it to the 'stimulus of imperfection;' Abernethy, 'to the frequent renewal

* Dorsey's Surgery, Vol. ii. p. 163.

† Ibid. vol. ii. p. 188.

and long-continued application of air to a surface unaccustomed to it; and John Bell, to the length of the incision,' &c. This question received at last a satisfactory solution by the late Dr. James Cocke of Maryland, in his inaugural dissertation, published at Philadelphia, in 1804. 'This gentleman showed, by a variety of well-devised and satisfactory experiments, 'that the inflammation which supervenes on the surfaces of wounded cavities is the consequence of the change and diminution of temperature caused by the admission of air into them. That the vessels at first debilitated by the abstraction of their natural heat, and that they afterward take on an increased action and inflame.'*

"Dr. J. R. Barton has lately invented a very ingenious and valuable mode of bandaging the lower jaw, in the treatment of fractures and other injuries of this part. See 2d No. vol. ii. of this journal.

"For preventing or arresting the progress of whitlow, Dr. Perkin of Philadelphia has introduced an excellent remedy. It consists in making an eschar on the affected part by the early application of caustic.

"In midwifery, many valuable improvements, both theoretical and practical, have originated in this country. In cases of difficult parturition, depending on rigidity of the mouth of the uterus. Dr. Dewees has introduced a very important practice. He recommended many years ago, in such cases, copious bleeding, *usque ad deliquium animi*, and experience abundantly proves the utility of this practice.† So important was this treatment considered by the late professor Shippen, that he publicly pronounced it, as forming an epoch in practical midwifery.

"When, in pregnancy, the placenta is situated over the mouth of the uterus, much difficulty and danger from hæmorrhage usually attends for some time previous to, and during parturition. In cases of this kind, the common practice is to break through the placenta, and to deliver the child by the feet. Dr. Dewees has recommended, and used successfully, a mode of practice in such cases, which obviously possesses many advantages over the other methods commonly pursued. He directs the accoucheur to pass his hand up, between the placenta, membranes, and the uterus to the top of this organ—there to rupture the membranes, and laying hold of the child's feet, to deliver it. The advantages of this mode of operating are, first—Much less violence is done to the connexion of the placenta with the uterus, and thereby the risk of increased hæmorrhage diminished. 2. Much time is saved. 3. We arrive at the feet, and can command their descent with much more certainty. 4. We prevent an atony of the uterus by allowing the waters to escape gradually and at will. 5. It prevents the fœtus from being entangled in the placenta, and thus does away the inconvenience that would arise from the in-

* See Dorsey's Surgery, vol. i. page 91.

† An Essay on the means of lessening pain in certain cases of difficult parturition, by W. P. Dewees, 2d edition, 1819.

crease of bulk, as in the former method, the size of the placenta is added to that of the child. 6. It prevents the rude and sudden separation of the placenta from the uterus.

"There is no accident more to be deprecated in obstetrical practice than *inversio uteri*. Reduction is frequently impracticable, and in this case death generally follows speedily. When the inversion is incomplete, so that part of the uterus remains within the neck, whilst the fundus projects through it in an inverted state, it becomes strangulated, and its reduction is rendered impossible. In such cases, Dr. Dewees recommends grasping the projecting tumour of the uterus firmly, and to bring it forwards, so as to complete the inversion. This operation he has practised with success, and with almost immediate relief to the patient.* The uterus afterward contracts to a small size, and may, if it becomes inconvenient, be removed by ligature, as lately practised with success by Mr. Newnham of England.

"That pain is not only unavoidable, but essentially necessary in parturition, is a doctrine which had never been contested by any one, we believe, until Dr. Dewees brought forward a contrary opinion, in an interesting paper, published in the 1st vol. of the Philadelphia Medical Museum. Lately, the same sentiments have been delivered by Dr. Power of England, in a book he has written on midwifery. This writer, though claiming to himself the merit of having developed new and important principles in midwifery, is entitled only to the minor praise of having *adopted* the sentiments of our countryman, Dr. Dewees.

"Ergot has lately been introduced into *regular* practice by Dr. Stearns of Albany. We are aware that this article was used in France and Germany more than a century ago. It was however not known in *regular* practice, until Dr. Stearns brought its virtues before the public; and to him, therefore, rightfully belongs the merit of having first directed the attention of the medical public to the use of this valuable article in obstetrical practice.

"In a country like ours, extending through every variety of soil and climate, Nature, it is reasonable to suppose, has not neglected to bring forth many of her healing and balsamic plants. From the bosoms of our own forests, accordingly, have we already drawn a great variety of remediate articles of the greatest utility in the cure of diseases.

"To no one are we more indebted for a knowledge of our indigenous Materia Medica, than to the late professor Barton. His zeal and industry in the cultivation of this department of medical science, his readiness to communicate to others the knowledge which he sedulously collected from every accessible source, concerning our Vegetable Materia Medica, and above all, the care which he constantly took to direct the attention of the medical students of the University of Pennsylvania to the investigation of the virtues of our native plants,

* See an Essay on the partial inversion of the uterus. By W. P. DEWEES, in Coxe's Medical Museum, vol. vi. p. 21.

contributed in a remarkable manner to the increase of knowledge upon this subject.

"To notice, in detail, all our native medicinal plants would be swelling this part of our retrospect beyond all proper bounds. We may enumerate the following, as among the most valuable of our lately discovered medical plants.

"*Lobelia inflata*, *heuchera Americana*, *rubus* *trivialis*, *sanguinaria canadensis*, *geranium maculatum*, *orabanche virginiana*, *podopyllum peltatum*, *asclepias tuberosa*, *daucus carota*, *prunus verticillatus*, *cornus florida*, *ulmus fulva*, *diospyros virginiana*, *zanthoxylum fraxineum*, *magnolia glauca*, *prunus serotina*, *litiodendron tulipefera*, *rhus typhinum*, *rhus radicans*, *phytolacca decandria*, *coptis trifoliata*, *frasera walteri*, *baptisia tinctoria*, *cunilla mariana*, *eupatorium perfoliata*, *zanthorrhiza apiifolia*, *hydrastis canadensis*, *convolvulus panduratus*, *comptonia asplenifolia*, *euphorbia ipecacuanha*, *spirea trifoliata*, *gaultheria procumbens*, *tristeum perfoliatum*, *monarda punctata*.*

"The *polygala seneca*, though long known as a valuable article of the *Materia Medica*, has had its virtues more accurately ascertained, within the period of our view. Dr. Archer, of Maryland, first noticed its excellent powers in the cure of *cynanche trachealis*, and Dr. Hartshorne first observed its *emenagogue* virtues.

"*Cantharides* also appear to possess very valuable *emenagogue* powers. For a full and accurate knowledge of the virtue of flies in promoting the menstrual discharge, we are indebted to Dr. Jos. Klapp. Several writers, we are aware, and among those Dr. Chapman in particular, have noticed these virtues of the flies, before Dr. Klapp's essay on this subject was published, but it does not appear that any one before him drew his conviction of their utility from actual and reiterated experience. See Dr. Klapp's Essay on *Catharides*, in the first vol. of this journal.

"Physiology has not advanced as rapidly in this country as most of the other branches of medicine. Practical medicine chiefly is the field in which the physicians of this country have particularly distinguished themselves. Physiology, nevertheless, has been cultivated with much care, and has received several important improvements among us. The subject of cuticular absorption in particular has been investigated with much attention and success by Drs. Klapp and Rousseau. By the experiments of these gentlemen, it seems to be demonstrated that no absorption can ever take place, from the cuticular surface of the human body.

"Dr. Mussey, however, performed a number of experiments, from which it would appear that madder does pass through the external surface into the circulation; but whether the passage of this substance through the cuticular surface was by absorption, or by percolation simply, is not as yet determined. Madder is certainly

* See Dr. Attb's paper on this plant, in the present number of our Journal.

a very penetrating article. Substances, very little porous, steeped in it, receive its colouring matter in so fixed a manner, as to make it almost impossible to remove it again. By bathing the body with it for some time, it creates a stinging and prickling pain in the skin. It is therefore very probable, that when madder does pass through the skin unto the circulation, it penetrates the cuticle mechanically and coming in contact with the absorbents opening under the cuticle, is by them taken up and carried into the circulation.

"Dr. Rush's theory of the spleen deserves, we think, to be ranked among the modern improvements in physiology. According to his theory, the spleen serves as an important preservative organ in the animal economy. It constitutes a waste gate or reservoir for the torrent of blood excited into action by violent and excessive agitation of the blood-vessels, whereby the more tender and vital organs are protected from the too violent effects of this force, and from dangerous congestions.

"Dr. James Johnson, in his valuable work on "*the liver, internal organs, and nervous system*," says, 'When the balance of the circulation is broken, and the blood is determined from the surface upon the internal parts,' (as in the cold stage of fevers) 'were it all to accumulate in the large vessels about the heart, and in the lungs, immediate death would be the consequence; but the local abstraction of so large a proportion of blood from *actual circulation*, by its quiescence in the *spleen* and portal circle, (where plethora is not so immediately detrimental) preserves the heart and lungs from being overpowered, till reaction restores the equilibrium between the surface and the anterior. *From this view of the affair, the utility of the Spleen, as an organ of preservation, is no longer doubtful.*'

"It was for many ages believed, that the blood in certain diseases entered into putrefaction, or, at least, into its incipient stage. Hoffman and Cullen first opposed this doctrine, and rendered it extremely probable, by reasoning from general principles, that this can never take place. What was thus rendered probable by reasoning upon the subject, Dr. Seybert demonstrated to be true, by a series of well-directed and conclusive experiments.*

"In anatomy, although cultivated with as much assiduity in this country as any other department of our science, we cannot boast of many discoveries. Anatomy is a field, in which the most patient and well-directed inquiry can hope for little that is new. In Europe this science is cultivated with uncommon zeal, by men of the first grade of genius; and yet how seldom do they add any thing of importance to our knowledge of the human structure! After so many centuries of the most patient and acute examination of the human body, can it be wondered that so little, now, awaits the most prying researches of the anatomist?

* An attempt to disprove the putrefaction of the blood in living animals, by Dr. A. Seybert.

"The late Professor Wistar, shortly before his death, communicated to the Philosophical Society a paper, in which he proves, that the 'generally received account of the formation of the sphenoidal sinuses is not strictly correct.' He describes two small bones which have heretofore been considered as processes of the sphenoid bone, but which he demonstrates to be distinct from it.

Dr. McClellan of Philadelphia has lately shown, that 'the common idea respecting the extent of the pleuræ is incorrect. That they do not terminate at the first ribs, as is stated in all the books, but extend to some distance above them, and line the inner surface of the scaleni muscles.' Dr. M'C. has found the pleura to extend as high on each side as the thyroid cartilage. It is therefore obvious, that the pleura becomes involved, in all operations on the subclavian, and lower portion of the carotid arteries.

"We have thus endeavoured to notice such improvements in medicine, as have been made during the last thirty years. We cannot pretend to have given all the improvements with which medical science has been enriched in America. We have however given all we had a knowledge of; and if we have omitted some facts, and thereby not rendered justice to all the successful cultivators of our science, let it be ascribed to any thing but want of candour. *Sum cuique.*"

XI.

A Synopsis of the various kinds of difficult Parturition, with Practical Remarks on the Management of Labours. By SAMUEL MERRIMAN, M.D. F.L.S. Lecturer on Midwifery; Physician-Accoucheur to the Middlesex Hospital and to the Parochial Infirmary of St. George's, Hanover Square; and Consulting Physician-Accoucheur to the Westminster General Dispensary. Third Edition with considerable Additions and an Appendix of Illustrative Cases and Tables. Octavo, pp. 323. London, 1820.

"Da spatium tenuemque moram, male cuncta ministrat
"Impetus."

Statii Theb. Lib. 10.

THERE never was a period, when a work on the obstetric art was read with so much interest, as Mr. Merriman's will be at the present moment. A recent, melancholy event has given rise to an unusual solicitude respecting all difficult and even tedious labours; and the medical republic will rejoice to find that a third edition of the excellent book before us is presented to their attention. The numerous

and importunate avocations in an extensive practice of midwifery, together with lectures and consultations, occupy so much time, as to render literary pursuits exceedingly difficult : hence we have fewer volumes written on this, than on the other branches of the profession.

In pursuance of our system of diffusing practical information, we shall endeavour to convey a general outline of the work before us ; interspersing such remarks as our own obstetric experience may suggest.

The dedication of a book seldom attracts the notice of a reviewer, who, in general, is anxious to hasten towards the table of contents. In this instance, however, we are induced to do justice to the grateful and affectionate disposition of Dr. Merriman, by informing our readers that his book is not ushered into the world under the splendid auspices of a noble lord, but is simply dedicated to the memory of his late uncle, Dr. Sam. Merriman, whose excellent qualities are justly and piously recorded. In a neighbouring nation we believe this custom is common : the celebrated Xavier Bichat addresses his *Treatise on the Membranes* to his father, whom he called his best friend.

The various kinds of difficult parturition are arranged by Dr. Merriman in a nosological form. This attempt is not new : Sauvages, Sagar, Linnæus, Macbride, Young, and others, include *Dystocia* in their respective systems ; and under the genus *parodynia* Mr. Good has compressed different species and varieties. It has been the object of the author to conform, as much as possible, to the models of Sauvages and Young ; and to exhibit a more correct and extensive view of difficult labours, than is to be met with in their works. The arrangement adopted in the book before us, consists of two classes, which are divided into orders, as follow :—

CLASS I. Eutocia.

Order 1. Eutocia simplex. *Natural Labour.*

CLASS II. Dystocia.

Order 1.	D. diutina.	<i>Lingering Labour.</i>
— 2.	D. anenergica.	<i>Powerless Labour.</i>
— 3.	D. perversa.	<i>Malposition of the Head.</i>
— 4.	D. amorphica.	<i>Deformity of Pelvis.</i>
— 5.	D. obturatoria.	<i>Obstructed Labour.</i>
— 6.	D. ectopica.	<i>Displacement of the Uterus.</i>
— 7.	D. transversa.	<i>Preternatural Presentations.</i>
— 8.	D. gemina.	<i>Twin Births.</i>
— 9.	D. laceratoria.	<i>Ruptures and Lacerations.</i>
— 10.	D. hæmorrhagica.	<i>Flooding Cases.</i>
— 11.	D. syncopalis.	<i>Faintings and Palpitations.</i>
— 12.	D. epileptica.	<i>Puerperal Convulsions.</i>
— 13.	D. inflammatoria.	<i>Fevers and Inflammations.</i>
— 14.	D. retentior.	<i>Retention of the Placenta.</i>
— 15.	D. inversoria.	<i>Inversion of the Uterus.</i>

This division appears sufficiently minute ; but we think it would have been more consistent with the rules of classification to have thrown the orders into species, and to have adopted Mr. Good's class *genetica*, and order *carpotica* : thus making *eutocia* and *dystocia* two genera, instead of two classes, and the subdivisions in the sections, varieties instead of genera.

On the management of *lingering labours*, arising from original or accidental weakness of habit in the mother, the author makes the following remark.

" If there be want of rest, from $m \times$ to $m \times \times$ of tinct. opii, may be given with great advantage. Much larger doses of opium, namely, to the extent of six, eight, or ten grains of *extr. opii*, have been recommended in this kind of slow labour, with a view to relax spasm, and render the uterine action more perfect ; but such herculean doses can very rarely be necessary, and would not always be safe." P. 25.

In a note he observes that three cases have occurred within his own knowledge, in the practice of a midwife, where an entire suspension of uterine action was produced, requiring the aid of instruments to effect delivery, by, as he conceived, the injudicious exhibition of this medicine.

An *irregular, partial* action of the uterus, *excessively painful*, and often *premature*, has frequently come under our notice, and has been speedily removed by two or three grains of opium. We have known instances of its continuance, for the space of several days, during which time no impression has been made, on the *os uteri*. On one occasion we were called in by a surgeon, who had been in attendance three days, until his patience was exhausted, in expectation, hour after hour, of some progress being made in, what he had supposed to be, labour. We directed three grains of opium, and the patient was speedily relieved. Regular labour did not follow in less than a month. Cold, fatigue, and sometimes intestinal disorders, have appeared to us to have been the remote causes.

In *tedious labours*, it was the practice of Mauriceau, to administer an acidulated infusion of senna, and to inject a stimulating clyster. We are ourselves partial to the latter remedy, and remember once to have observed the most rapid and vigorous uterine action produced, and the largest *fœtus* we ever saw expelled, by its use in a case of very tiresome labour.

When *fever* of an *inflammatory* type is present, bleeding is exceedingly beneficial ; but it is a remedy requiring caution in its employment.

The membranes, Dr. Merriman remarks, should not be artificially ruptured :—

" 1. While the head of the *fœtus*, or a large portion of it, is above the brim of the pelvis.

" 2. While the *os uteri* is undilated, or in a state of rigidity.

" 3. While the perinæum is thick and firm, or rigid." P. 33.

When the *fœtus* has been long dead, the abdomen, being greatly



distended with putrid air should be punctured. The author has known two fatal instances of rupture of the vagina, which arose from a neglect of this precaution, and from the rashness of the midwives.

It is necessary to pay particular attention to prevent a laceration of the perinæum, when the *forehead* is inclined towards the *pubes*; and when the *face* is the presenting part, although the expulsion may be generally left to nature, yet under certain, peculiarly favourable circumstances, turning of the child might probably be advisable. In face-presentations there is perhaps a peculiar tendency to retention of urine, which must be carefully obviated.

The following passage on *dystocia amorphica* cannot be too strongly impressed on the minds of all accoucheurs :

“ It becomes us to be exceedingly cautious, not to suppose, upon light and insufficient grounds, that the distortion is too great to allow the child to pass without the intervention of instruments ; and particularly when there is a question about employing the *perforator*, an instrument always incompatible with the life of the child, we ought to weigh every circumstance very carefully in our minds, and, *if possible procure the opinion of some other experienced practitioner*, before we determine upon having recourse to it.

“ The maxim of the stern satirist,

Nulla unquam de morte hominis cunctatio longa est,
applies not only to the adult, but to the infant in the womb.” P. 49.

In proportion as surgeons are better educated, they become more conscientious and humane ; and we trust, ere long, that the barbarous operation of *embryulcio* will be found to be very rarely *necessary*. Placed in situations affording most extensive practice in midwifery, and having been often called upon to assist others, we have never in the course of the last 20 years, found it requisite to open the head, or to employ any other instruments in difficult labours than the *forceps* or *lever*. We have repeatedly been requested to perform the operation by those, who have believed the child to be dead and the mother incapable of being relieved by any other expedient. Even in these instances, by the judicious use of the *lever*, we have delivered the patient in an hour or two of a *living* child. Moreover, we have attended one woman, who, at an advanced age, brought a fine, living child into the world without any artificial aid, after she had formerly several times submitted to the unnecessary destruction of her infant, and subsequently to the operation for inducing premature labour. By want of sleep, and by anxiety and uninterrupted attention to one subject, the mind becomes fatigued and loses its healthy tone ; like a spring which has been overbent. Hence it is not uncommon for the medical attendant to experience a temporary loss of, what *Cicero* calls, the “ *robur animi* ;” and his judgment being thus impaired, he is not, in our opinion, so fit to decide on the propriety of the important operation ; we are speaking of, as when he first entered the apartment of his patient. To a person so circumstanced, the comfort and advantage resulting from the friendly advice and co-operation of an experienced, professional friend, are abundantly apparent.

The symptoms denoting the death of the child, both before and after labour has commenced, are enumerated by Dr. Merriman with sufficient minuteness; and he concludes his remarks by observing that

"We ought never to be satisfied with a single token of death; but should examine each symptom separately, and afterward several collectively before we allow ourselves to come to the ultimate conclusion." P. 55.

Dystocia obturatoria may be occasioned by the presence of the hymen, or by a cohesion of the labia, or of the vagina; but the action of the uterus will alone be sufficient in most cases to overcome the difficulty.

Tumours growing from the organs of generation may require the aid of the forceps or vectis; and, should these be inadmissible, it would be right to pause, and to consider whether to remove the tumour, or to diminish the size of the child, would be most likely to be attended with ultimate advantage. In three out of five cases, in which the perforation was employed, the mother did not recover; and when turning was undertaken, it does not appear to have been a successful mode of practice either to the mothers or the infants. When the tumours have been opened, it has in several instances been afterward necessary to perforate the foetal head. The evidence we at present possess is more in favour of opening the tumours, when they contain a fluid, than of any other mode of procedure. The Cæsarian operation has never been attempted, we believe, in labours of this kind; and its general fatality in this country might be a very great objection to it. A plate, representing an ovarian tumour, which prevented the descent of the child's head, is annexed.

Protrusions of the urinary bladder into the vagina may be detected and cured by the catheter.

In cases of *dystocia ectopica*, occasioned by a projection of the os and cervix uteri, without the os externum during labour, the os uteri should, if possible, be returned within the vagina, and the edge of it ought to be supported by the expanded hand during the passage of the head.

That the os uteri is sometimes found projecting above the symphysis pubis was explained in a dissertation by Dr. Merriman in 1810; and his uncle and Dr. Denman were both convinced of the fact in a patient whom they attended. This opinion has also been subscribed to by several other practitioners. But the author says he is

"Informed that a professor of midwifery, whose practice and lectures at a celebrated university have ensured him a high reputation, asserts the utter impossibility of such an occurrence, which, according to him, never did, and never will, happen." P. 64.

Breech-presentations were formerly supposed to require the operation of turning the child; and even Dr. Hunter, in the beginning of his practice, adopted the old doctrine of pushing up the presenting part and turning. At that time he lost almost every child, but after he left the process to nature, he always met with success. A fillet

may be useful, passed between the belly and thighs ; but the blunt-hook should never be applied, as Dr. Young says, it is difficult to avoid breaking the child's thigh. Professors Plenck and Wrisberg, and Dr. Hamilton recommend the forceps to be employed ; but our author has had no experience with them in nates-cases, and in the *London Practice of Midwifery*, which is supposed to exhibit the doctrines of a celebrated teacher now deceased, they are represented from frequent trials to be of no use.

Presentations of the inferior extremities, by occasioning a compression of the funis, expose the child to considerable danger. The delivery of the body should be effected slowly, and care should be taken to conduct the forehead into the hollow of the sacrum. The same rules apply where the nates present. In these cases, an ample dilatation having been effected by the expulsion of the nates, the arms should be brought down ; but in feet-presentations, it will be better to let them remain, as there is danger of fracturing or dislocating them, on account of the contraction of the os uteri round the upper part of the head, especially where the birth of the child has been hurried by turning. The head should be extracted with all the speed which circumstances will admit. For this purpose a finger of the left-hand should be introduced into the child's mouth, and the fore and middle fingers of the right-hand should be passed over the nape of the neck, one finger resting on each shoulder. A moderate, extracting force may now be carefully employed to bring forth the head. The force should be made upwards and downwards, or from side to side. We remember an instance in which, from ignorance or carelessness, a *rotatory* motion was exerted to such a degree, as to separate the body from the head ; and the means attempted to remove the latter were so awkward, as to occasion the mother's death.

There are no presentations more difficult to manage, or more dangerous, than those of the *upper extremities*. From the time of Ambrose Paré to the present, it has been generally agreed that the best practice is to turn and deliver footling. This is most easily done, when the os uteri is sufficiently dilated, before the membranes are ruptured ; and care should be taken to bring down the feet along the belly, not over the back of the child. When the arm has descended into the vagina, it is seldom that we are able to take hold of both feet. If the liquor amnii has been evacuated, and the os uteri but little dilated and rigid, the safer plan will be to wait until the parts become more relaxed, for fear of exciting inordinate or spasmodic action, or a laceration of the uterus. Indeed, in all cases, when the os uteri is firm and rigid, it will be found best to wait with patience ; as we have known dangerous and even fatal consequences arise from too hasty a dilatation under these circumstances. We have seen cases of this kind attended with a quick, hard pulse, furred tongue, and other inflammatory symptoms, in which we have thought bleeding at the arm might have been advantageous. This practice has been adopted with the best effects, when the labour-pains recur often and inordinately strong and forcing. Dr. Hamilton recom-

mends the exhibition of eighty drops of laudanum. The os uteri having become more yielding, and the excessive uterine action having subsided, we must proceed to deliver without delay. By this cautious mode of proceeding it has often happened that the lower extremities have been brought down by a spontaneous evolution, a phenomenon first accurately noticed by Dr. Denman. Dr. Douglass of Dublin believes, that this natural process would more frequently take place, if it were more frequently trusted to by the obstetric attendant. There does not appear to be any advantage in one position of the patient more than another, but Dr. Merriman has sometimes thought that he has facilitated the passage of the head through the pelvis by placing her on her back.

In the practice of Dr. Merriman and his uncle, amounting together to nearly 20,000 labours, no instance has occurred of presentations of the back, belly, or side.

It was formerly supposed, when the *funis* descended into the vagina, that the child lay across the pelvis, the abdomen being over the os uteri. The head, the *nates*, or one of the extremities will be found presenting: the belly being seldom or never in that situation. While the *funis* continues to pulsate, there is hope that the child's life may be saved; and various contrivances have been suggested and tried for the purpose of returning the *funis* and retaining it above the head, and out of the sphere of compression. Any of these means may be attempted, but as they frequently fail, the best practice is to turn and deliver by the feet, if the following favourable circumstances, enumerated by Dr. Haighton in his syllabus of lectures, are present.*

- " 1st. A pulsation of the cord, proving the life of the child;
- " 2d. The head not having yet entered the pelvis;
- " 3d. Pains not strong;
- " 4th. A relaxed state of the external parts, to admit of a ready extrication of the head."

Should the arm and *funis* present together, turning will be indispensable.

In *twin*-cases, is the birth of the second child to be left to nature, or terminated by art? The following is an outline of Dr. Merriman's practice.

- " 1. When both the children present naturally, and the labour of the first terminates without artificial assistance, and without much fatigue to the patient, I wait for the spontaneous occurrence of the secondary pains; but should these not come on soon, or in a *reasonable* time, I rupture the membranes; and then commonly find, that the second child passes with comparative ease through the pelvis, the parts having already undergone sufficient dilatation.

* Dr. Ducamp, of Paris, has invented a very ingenious contrivance for returning the *funis umbilicalis*, a drawing of which we hope soon to present in this Journal. It is now in the hands of Mr. Alcock for that purpose. *Ed*



" 2. If the first labour has been natural, and the second child presents in a wrong direction, I have deemed it generally expedient, with very little delay, to extract it by the feet.

" 3. If the first labour has been preternatural, or very difficult, or dangerous, this has always seemed to me an additional reason for terminating the second, as expeditiously as circumstances will admit. Whether, in this case, it will be sufficient merely to rupture the membranes, or whether it will be preferable to bring down the feet, or to assist in any other manner, the accoucheur in attendance must determine." P. 120.

Lacerations are divided by our author into five species : laceration of the perinæum, of the labia pudendi, of the vagina or uterus, of any other internal organs, and of the ligaments of the pelvis. Laceration of the perinæum is a most distressing accident, especially when it extends into the rectum ; and when it has once occurred, we have found it liable to happen during subsequent labours, unless prevented by great care. Besides a due support of the perinæum during the expulsion of the head, several preliminary measures are recommended with much judgment. The cure of this misfortune has been attempted by sutures, but as might have been expected, without success. In parts, so loose and flabby, the smallest wound is apt to produce the suppurative inflammation ; and the kind of wound produced by parturition is a torn, not an incised one. Great pains have also been taken with adhesive plaster, but we need not say that they were ineffectual. The plan tried by Smellie was rational, and we think might succeed in some favourable cases, if carefully conducted. He waited till the parts were cicatrized, and the patient had recovered from her confinement, when he performed an operation somewhat similar to that for the hare-lip. The treatment we have adopted has always been to poultice in the first instance, and, after suppuration has been established, and the tumefaction has subsided, to insinuate between the lacerated parts a little lint immersed in a lotion composed of tinctura myrrhæ and liquor calcis, in the proportion of one part of the former to five of the latter. Our patients have all done well ; and lacerations of the labia pudendi have been always cured in the same manner.

Lacerations of the vagina and uterus have happened from a morbid state of the parts, but the most common cause is the violence of the labour-pains acting irregularly, or impetuously against some projecting part of the child, upon which the uterus splits. This is most likely to take place, when the pelvis is distorted, or the presentation is preternatural. It may be occasioned by the operation in turning the child, or in applying instruments ; and sometimes the bulk of an emphysematous child, in passing through the os uteri and vagina, has torn these parts.

Rupture of the uterus may take place before the full term of uterogestation, and while the os uteri is undilated. Here it is impossible to afford any manual assistance, excepting by the operation of *gastro-tomy*, which we think would be an uncertain expedient. In a few instances, at the expiration of months or years, the child has been

removed in a dissolved state by a process of ulceration established by Nature.

When this accident happens during the pains of labour, these symptoms speedily present themselves ; a sense of something giving way internally, preceded by a severe pain, described as cramp ; great languor and debility ; a sudden vomiting of the contents of the stomach, also a vomiting of a brownish or coffee-coloured fluid ; a quick, weak, fluttering pulse ; cold perspiration ; dyspnœa ; an instant cessation of the labour-pains. The presenting part, being retracted, is no longer within reach of the finger ; the child is generally discovered to have escaped into the abdomen, but in a few instances has remained in the uterus after the laceration. It has been recommended to pass the hand through the rent and to deliver by the feet ; and it has succeeded in saving the patient's life ; but in general all that can be done proves unavailing. This practice was countenanced by Dr. Denman ; but in his *Observations on the Rupture of the Uterus*, published in 1810, he seems to be convinced that the patient would often have a better chance of recovery, were the case left to Nature, than by any interposition of art. When the child has only in part left the uterus, Dr. Merriman considers it the best practice to deliver footling or with the forceps, according to the presentation ; and if the lacerated part be of sufficient extent, and the accident be very recent, he believes it would be expedient to deliver by the feet, even should the child have entirely escaped from the uterine cavity.

Rupture of the urinary bladder can only happen from neglect of the practitioner, who should be careful to examine the abdomen, and introduce the catheter from time to time, if needful. We shall extract the following paragraph from our author's book, for the purpose of making a remark upon it.

"Should the laceration allow the urine to escape into the cavity of the abdomen, there can of course be scarcely any expectation of a recovery, but sometimes the laceration has been at the *cervix vesicæ*, opening into the *vagina* ; this accident is not necessarily fatal ; but the patient will ever afterward remain in a most uncomfortable state, from a constant involuntary discharge of urine." P. 111.

The enuresis consequent on difficult parturition, to which we suppose Dr. Merriman alludes, we have always found to proceed from pressure too severe and long-continued for the parts to bear, and not from laceration or rupture. There will, in fact, be found a loss of substance occasioned by the *sloughing process*, following high inflammation. In whatever way a communication is formed between this viscus and the vagina, the surgeon ought not, in our opinion, to consider the case incurable : for when he is called in a few days after the sloughs have been separated, or before cicatrization has been completed, we should have very sanguine expectations of a perfect cure being accomplished by the adoption of the ingenious plan of treatment pursued with success by Mr. Barnes,* which reflects much

* See *Medico-Chirurg. Transactions*, Vol. vi, page 583.

credit on his judgment and humanity. We should not entirely despair, were we consulted after the fistula had been formed a considerable time ; since we find that, under these circumstances, Desault effected cures by means of pressure continued with great patience and perseverance.

The aorta, internal iliac vein, the liver and other viscera have been ruptured during labour.

"When great numbness in the lower extremities continues for a considerable time after delivery, with inconvenience and difficulty in moving the thighs, and pain and tenderness about the groins or hips, it may be supposed, that a laceration of the ligaments of the pelvis has happened in a slight degree. More rarely a greater degree of laceration befalls these parts, for sometimes the bones of the pelvis are forcibly separated, producing a state of lameness and weakness, which months and years very imperfectly overcome." P. 112.

Labour attended with *hæmorrhage* requires nice management. The patient should be kept quiet, cool, and recumbent. Cold clysters should be administered. The diet to be simple and limited. Stimulants to be avoided. Refrigerants internally and cold liquids or ice externally. Venesection to be used cautiously, and in placental presentations and hæmorrhage after delivery inadmissible.

"And the *plumbi acetas*" (*superacetas*), "and many other internal remedies, which are efficacious in restraining chronic hæmorrhages, cannot be at all relied upon in the floodings of parturition." P. 113.

Dr. Merriman divides these hæmorrhages into three species: accidental, unavoidable, and atonic. The first occurs when the placenta is naturally situated within the uterus, and is separated by accident. A considerable discharge of blood may take place within the uterus, occasioning syncope or death, with very little appearance of discharge from the vagina. The alarming symptoms we apprehend arise from the rapidity with which the hæmorrhage occurs, and not from the quantity of blood poured forth: for in a lady, attended by Mr. Saumarez, who died from this accident, only a pint and a half of blood were found extravasated on dissection. In addition to the other remedies, diluted sulphuric acid may be given; but bleeding should not be employed, unless the pulse be very hard, strong, and active. If the action of the uterus should commence, and the flooding in consequence diminish, farther means may be unnecessary; but if these events should not happen, it will be proper to introduce the finger, and, having dilated the os uteri, to rupture the membranes during pain.

The hæmorrhage, proceeding from an attachment of the placenta over the *cervix uteri*, was not generally understood till of late years. Instead of being originally deposited in this situation, it was formerly supposed to have dropped down by its own weight; and the opinions of Portal on this subject, published in 1685, were strangely overlooked by his contemporaries. This species of flooding is increased

by every pain, which, by promoting the dilatation of the *os uteri*, lacerates the placenta from it. In all cases of this nature, to turn and deliver by the feet will be indispensable. Nature may now and then be sufficient without assistance, but such a rare occurrence must not induce us to interfere with an established rule of practice, particularly one of such vital importance as this. When the hæmorrhage is profuse, no time is to be lost; but when it is moderate, and no particular expedition is called for, we perfectly agree with Dr. Merriman that it is desirable to obtain, if possible, a certain degree of softness and dilatibility of the uterus. The *os uteri* is sometimes found thick, unyielding, and exceedingly tender. In this state, a rude dilatation would be hazardous to the mother and difficult to the operator. A gentle hæmorrhage here does good, by unloading the turgid vessels, and, if we may be allowed the expression, by removing the inflammatory state of the parts. The operation is performed either by breaking down the adhesions between the placenta and cervix uteri, rupturing the membranes, and taking hold of the feet; or by perforating the placenta with the fingers, and thus getting in contact with the body of the child. The former, if practicable, appears to be the most adviseable process. Every step must be taken with firmness and deliberation, and the patient's strength supported by proper nourishment. The child and placenta being removed, the practitioner should be satisfied that the uterus has duly contracted itself. Dr. Merriman has often observed the *phlegmatia dolens* to follow.

All the usual means of suppressing hæmorrhage are to be employed when it takes place *after delivery*. If the placenta is still retained, the hand must be introduced to separate it; but if expelled, a broad bandage should be put round the body, and a sponge immersed in port-wine, cold vinegar and water, or a lump of ice may be introduced into the vagina. Large coagula, preventing the contraction of the uterus, should be withdrawn by the introduction of the hand.

On the practice of applying plugs in uterine hæmorrhage some sensible remarks are made by the author, who says that they are inapplicable when the bulk of the uterus exceeds that of a pregnancy of three or four months, and when the parietes are easily distended. The indiscriminate use of opium is also condemned. A case is related by Dr. Atkinson, in which 80 drops of laudanum so far paralyzed the uretus, as to render it incapable of farther contraction, and the patient died. Dr. Merriman remarks,

"The cases in which it" (opium) "seems most beneficial, are states of irregular spasmodic action of the *uterus*; cases requiring the child to be turned, but where the rigidity of the *os uteri* prevents the ready introduction of the hand; and cases, where, after delivery, great irritability prevails." P. 128.

The *ergot* of rye has been recommended in hæmorrhages, and in sudden deaths the transfusion of blood; but Dr. Merriman has had no experience of their efficacy.

In women of a delicate frame, of a nervous, irritable, and hysterical habit, *fainting, a sense of distress and oppression about the præcordia, and palpitations* are apt to take place. These complaints also happen to women exhausted by fatigue, by want of food and of sleep, and by apprehension or any other debilitating causes. They are mostly of an hysterical nature, but when preceded by organic diseases, they are of a more serious and alarming nature. The remedies recommended are, camphor-julep, sp. am. arom., sp. æth. sulph. &c. and opium, if great fatigue or want of sleep should be the cause. When the fainting is of long continuance or frequently repeated, it would probably be needful to expedite the delivery by any *safe* method, and the same may be said of fainting when it proceeds from exhaustion.

Labour accompanied with *epileptic fits* has always been considered very dangerous ; but the proportion of deaths in modern practice is not so great as it was formerly. Dr. Merriman very properly confines the term convulsions to those fits, which bear an exact resemblance to epilepsy. The etiology of the disease has been variously stated. Those who have believed it to be produced by general irritability, have advised opium ; by irritability of the uterus, immediate delivery ; by an overloaded state of the system, large bleedings and other evacuants. Dr. Merriman never saw a case in which, at the commencement, he could have dared to give opium ; and Dr. Hamilton always found it prove fatal at this period.* With respect to turning, the author does not have recourse to it on all occasions ; but he strenuously recommends the adoption of the depletory plan of treatment.

“ In most of the cases that I have seen, the evacuations from the bowels produced by cathartics, have been dark coloured, heavy, copious, and very fetid : I hardly recollect an instance in which the blood has not shown an inflammatory crust ; and it has often been very much cupped.

“ These facts will, I conceive, authorize me to recommend, in the first instance, having recourse to the depleting plan.” P. 136.

On the first occurrence of the fits, whether before, during, or after the labour, from 10 to 20 ounces of blood should be drawn from the arm, jugular vein, or temporal artery ; from 5 to 10 grains of hydr. submur. either in a pill or mixed with moist sugar, should be exhibited ; and a solution of salts once in three or four hours, until stools are procured. If the stomach should be overloaded, vomiting may be excited. The head to be shaved and constantly covered with the following lotion :

R Liq. am. acet. f. ʒvj.
Sp. rorism. f. ʒij.
Aquæ puræ, Oj. M.

* *Annals of Med.* vol. v. p. 340.

If the patient cannot swallow, a cathartic clyster to be injected : and should the convulsions continue unabated, it may be necessary to repeat the bleeding generally or locally, according to the state of the pulse.

The labour proceeding quickly, it may not be necessary to do any thing more ; but should it be slow, it will be right to apply the forceps, and finish the delivery. The perforator is to be avoided, if possible.

" I have so often had the pleasure, by delaying this *dreadful* operation, of seeing my patient delivered of a living child, that I cannot too much insist upon caution, and due deliberation upon this subject." P. 139.

When the convulsions continue after the delivery, the lotion must be persisted in ; a blister applied to the back or insides of the thighs ; sinapisms to the feet ; and, if the patient can swallow, diaphoretics, aperients, and light cordials should be given. The catheter to be used, if needful, twice daily. Dr. Merriman has known two or three cases, which have terminated in temporary mania ; and one in true chronic epilepsy, which continued some years, till the patient died of a pulmonic complaint.

The post mortem appearances, noticed by Dr. Denman, were an unusual flaccidity of the heart, and an emptiness of the auricles and ventricles, which have also been seen by others. In one instance, the author found an effusion of blood in the posterior part of the cranium.

A table, exhibiting the practice pursued in 36 cases, is subjoined.

The treatment of *fever or inflammation*, accompanying pregnancy or labour, must be conducted as circumstances require.

Different opinions have existed respecting the management of the *placenta*, when it has been retained an unusual time after the birth of the child. Dr. Wm. Hunter, for a long time, strenuously recommended its expulsion to be left entirely to nature, but several fatal accidents resulting from this practice, he was induced towards the latter part of his life to alter the opinion he had formed. Experience has now taught us, that the best plan, if the placenta is not expelled within half an hour, is to lay the hand on the abdomen, and gently to rub or press the parts over the uterus. These gentle means not succeeding within an hour or two, we must proceed to extract the placenta ; and in cases of hæmorrhage, we must do so immediately.

The introduction of the hand will sometimes produce the effect we wish, if not, the fingers should be moved about gently near the os uteri. When it is necessary to separate the placenta, we must take care to do it completely ; and then wait to give the uterus an opportunity of contracting. The whole process must be conducted slowly.

As retention of the placenta has occurred nearly five times as often in Dr. Merriman's public, as in his private, practice, it is to be inferred that it might often be prevented by observing the judicious directions of Mr. White, respecting the expulsion of the body of the child.



Inversion of the uterus may happen spontaneously, or from rude attempts to hasten the separation of the placenta. The uterus should be immediately replaced by the introduction of the hand and arm, well defended with lard. When the placenta is attached to the inverted uterus, the latter should be replaced, before the separation is effected. It must be observed that if the re-inversion does not take place before the uterus has contracted, it will be almost impossible to effect it, and the disease will remain incurable, excepting by the operation of excision.

Respecting the use of *instruments in midwifery*, "the old adage," says Dr. Merriman, "*neque temere neque timide*," though trite, is still the best motto, by which the accoucheur can be guided." P. 153.

After carefully examining the respective merits of the forceps and lever, the author seems to prefer the former.

"The judicious practitioner will use sometimes one and sometimes the other, as circumstances may require; but were we compelled to select one only of these instruments for constant use, the *forceps* is that, to which the most decided preference would be given." P. 155.

"So careful have the best professors of midwifery been to guard against an improper use of their instruments, that it has been laid down as a rule of practice, that the forceps shall never be applied till the ear of the child has been within reach of the operator's finger at least six hours." P. 156.

To this rule hæmorrhage and convulsions are exceptions.

Dr. Merriman's directions for the application of the forceps and lever do not differ from those laid down by Dr. Denman.

We perfectly agree with the author that the *legitimate* cause for using the *perforator* is *distortion* of the pelvis. This should be constantly borne in mind.

Before we proceed to the operation of *cephalotomy*, a considerable time should be allowed to elapse; because the operation will be more easily and safely performed; we shall know or believe that it was not done prematurely; and we shall be able to convince the patient and her friends of the necessity of it. We form our judgment from the dimensions of the pelvis; they from the length and severity of the labour.

To describe the operation here will be superfluous. Indeed we cannot too often repeat that more skill is required in deciding upon the *propriety* of operating, than in performing an operation.

The *Cæsarian operation* in this country has been exceedingly unfortunate; twenty-one out of twenty-two patients having perished. The fate of the children has been more favourable. In Ireland a singular case occurred. The operation was performed with a razor, by Mary Dunally, an ignorant midwife, and the poor woman recovered in twenty-seven days. On the continent it has been more frequently practised, and been more successful. Our comparative ill success is attributed by Dr. Merriman to previous disease, occasioned by *mollities ossium*, and to the fatigue, languor, and fever

resulting from improper delay. The interference of the ecclesiastical authorities in France and their decisions have promoted and familiarized the operation through the French nation ; and in Sicily an edict is now in force, declaring that no person shall be admitted to practise surgery, till he has been minutely examined touching the mode of performing the Cæsarian section. The encouragement thus given has led the Continental surgeons to act rashly on many occasions, as Baudelocque himself admits.

In the event of a woman dying undelivered near the expiration of her pregnancy, this operation ought always to be had recourse to without loss of time.

Of the various means suggested to obviate the necessity of piercing the mother's womb at the hazard of her life, or of utterly destroying the child, the most rational and effectual has been found the process of inducing *premature labour*. The section of the *symphysis pubis*, the discovery of which was so pompously proclaimed, is now universally laid aside ; and the uncertain and inadequate effect of *abstinence* in retarding the growth of the *fœtus in utero*, recommended by Mr. Lucas, must render that measure inapplicable in cases of distorted pelvis.

Thirty-three cases of labour, brought on artificially in the eighth month, have occurred in Dr. Merriman's practice, or come within his knowledge. Nearly one-third of the children have been saved, and all the women recovered. Certain limitations and cautions are transcribed from a sensible paper published by the author on the subject of inducing labour prematurely, and inserted in the *Medico-Chirurgical Transactions*, Vol. iii. p. 144.

In an *appendix*, which occupies more than one-third of the volume, Dr. Merriman has brought together a mass of practical information, interspersed with cases, illustrative of his synopsis, which will be found highly useful both to the student and the experienced practitioner. The limits we had allowed ourselves will not permit a minute analysis of this portion of the work ; we can therefore only notice a few of the most important articles.

The *clavus*, or *ergot of rye*, *secale cornutum*, or *spurred rye*, has been strongly recommended by some eminent American accoucheurs for the purpose of exciting and invigorating the action of the uterus during labour. A drachm, infused in three or four ounces of boiling water during ten or fifteen minutes, is the usual dose. Should not sufficient pain come on in half an hour, it may be repeated. Dr. Merriman had great difficulty to procure the ergot of rye ; but was at length supplied with some by Mr. Henry Davies of Conduit-Street, who had received it from Dr. Bibby of New-York. The period for its use is when the head has passed the brim of the pelvis. If given before this time, by increasing uterine action, the life of the child, Dr. Bibby says, will be almost certainly sacrificed. It has no effect, when the fœtus has been some time dead. Six cases are related in which it was administered, but we are sorry to remark, that the results were by no means favourable: three of the children being still-born, three dead, and only one, a twin, born alive.

Some judicious remarks are made by Dr. Merriman on the treatment of those labours, in which the head of the fœtus is distended by *hydrocephalus*. A melancholy mistake was made by a surgeon in one instance, which rendered the woman miserable all the rest of her life. The supposed hydrocephalic tumour was the distended bladder, which, being punctured, became so inflamed that part of it sloughed away, leaving an incurable aperture.

A most extraordinary case of sudden death is related, which was occasioned by violent mental emotion, during labour. This shows the importance of preserving the mind in a state of perfect quiescence.

Baudelocque and another eminent lecturer on midwifery, have stated their belief, that no *pulsation* is to be felt in the *fontanelle* before birth. Our author having, however, carefully examined this part in a fœtus, whose forehead presented favourably during its descent through the pelvis, was fully satisfied six several times that a distinct pulsation was perceptible. As the head descended lower, the pulsation became interrupted, and just as it was emerging, the phenomenon was no longer observable. The child was born alive.

In the next section of the Appendix two cases are recorded, in which the *hymen* was found entire during labour. In the one, the membrane was ruptured naturally by the head of the child : in the other, it was artificially divided : both did well.

Next we are presented with a most excellent account of *polypous tumours*, discovered during labour. In one instance, where the tumour was not removed, the patient, having been delivered, died from excessive pain, occasioned by the constant efforts of the uterus to expel the disease. To these cases we shall add one, communicated to us by Mr. J. M. Coley, of Bridgnorth.

" 1813, June 22d. Mary Head, æt. 38, mother of sixteen children, all of whom had been expelled about the 6th, 7th, or 8th month of pregnancy, either dead or nearly so, had complained, during three years, of pain in the right hip and ovary, and in the back. She had frequent rigors, syncope and a copious discharge of blood, alternated with leucorrhœa to an excessive degree. On examination he discovered a polypous tumour two inches in length, and, near its base, one inch in diameter, growing from the inner surface of the cervix uteri. The os uteri was dilated by the tumour to the extent of an inch. An operation being determined, Mr. Coley obtained the able assistance of his father, whose judgment has been matured by a laborious and successful practice of three and forty years. The patient being placed on her left side, Mr. Coley took hold of the tumour with two fingers, and secured it in a noose made with a double ligature, passed through the upper loop of an iron wire introduced as a conductor. The wire, acting as a third finger opposed to the two that had been before passed, was found useful in adjusting the noose round the base of the polypus. The ligature was now drawn quite tight, and secured to the lower loop of the wire ; and they were both left in the vagina.

" 24th. The ligature was tightened.

• " 26th. The tumour came away in a shrivelled state. The os

uteri had contracted and a prominence was perceptible on the inner margin of the posterior labium, the whole of which was thicker than the other.

"1814, July 3d. State of the os uteri about the same as it was just after the operation. The woman had another child afterward."

Cases similar to this will be found related by M. Gasc, in *Desault's Parisian Chirurg. Journal*, Vol. i. p. 278, and by Dr. Denman, in *Med. and Phys. Journal*, Vol. iii. p. 1. In *Med. Chirurg. Transactions*, Vol. iii. Drs. Denman and Clarke have published cases and observations with the view of improving and promoting the means of distinguishing the various uterine tumours.

Dr. Merriman gives an account of an *ovarian tumour*, which, obstructing labour, was punctured, and the delivery being afterward finished with the perforator, the woman died on the fifth day, apparently from exhaustion; no organic disease, excepting that in the ovarium, being discovered on dissection.

In the section on projection of the *os uteri above the symphysis pubis*, the following passage occurs:

"These cases I conceive establish the fact that a retroversion of the *uterus* may exist at the full term of utero-gestation, and, if I mistake not, go far to prove that many cases on record, of supposed extra-uterine gestation of the *ventral kind*, were in reality cases of retroverted *uterus*. There is something so repugnant to all that we know of the processes of conception and generation, in supposing that an *ovum*, accidentally conveyed into the cavity of the *abdomen*, can there be lodged and nourished, and brought to perfection, altogether unconnected with the uterine system; that unless the fact be clearly and unequivocally proved, it will hardly be believed." P. 235.

We think every one, who will reason on this subject, will be of Dr. Merriman's opinion with respect to those *fœtus* capable of supporting life; but we believe that many cases have really occurred of imperfect *fœtus*, or such as were not adapted to support life, which had never entered the uterus, but remained encysted during life, or had been expelled through different parts by the process of ulceration. A remarkable instance of imperfect *fœtation* is related by our friend Mr. J. M. Coley in the *Edinburgh Medical and Surgical Journal*, Vol. vi. p. 50. This patient, having died from mortification in the omentum in the fifth month of pregnancy, afforded him an opportunity of ascertaining that the jaw-bone, teeth, and hairs, found partly in the ovary and partly in the intestine, had never entered the uterus; but that the *fœtus*, with which she was pregnant at the time of her death, was in its natural situation.

When the uterus is strongly contracted in *funis-presentations*, it is exceedingly dangerous to employ force in turning the child. The late Dr. Garthshore, being solicited by a patient to deliver under these circumstances, found the contraction so great, that the uterus was ruptured by the violence made use of, and the patient was thereby speedily destroyed.

Dr. Merriman's account of *plurality of births* is entertaining and wonderful; and if we had not extended this article beyond our limits, we should have extracted that part of the Appendix for the amusement of our readers.

A most valuable collection of cases is presented by our author, exemplifying the treatment of different kinds of *uterine hæmorrhage*. The concluding remarks on the improper use of opium should be read by every accoucheur.

A no less valuable collection of instances of labour, accompanied with *convulsions*, next attracts our notice. Puerperal convulsions have been supposed to arise from great tenderness and irritability of the *os uteri*. In speaking of one of the cases the author says,

"On the contrary, the *os uteri* allowed the finger to be passed through its aperture, and to be pressed in every direction with the greatest ease. I have found this to be the case in every instance." P. 269.

In one patient who died of convulsions the following post mortem appearances were found :

"The vessels of the brain were much loaded with blood; there was a very trifling effusion on the surface. At the very posterior part of the left lobe about a tea spoonful of blood was extravasated. The *uterus* showed no particular marks of disease, except that on the right side there was a slight appearance of inflammation or contusion." P. 273.

These appearances are sufficient to show the propriety of adopting the plan of vigorous depletion, so strongly insisted on by the author. In our own patients, indeed, there has usually existed a previous, disturbed state of the mind, indicating, some time before labour has commenced, a congested condition of the vessels in the brain. On one occasion mental imbecility and hemiplegia preceded the confinement for the space of three months, and followed it for three weeks; and in one of Dr. Merriman's patients slight maniacal affections continued a long time after delivery.

Cases of inversion and of spontaneous inversion of the uterus are described with minuteness; we are next favoured with an account of the extirpation of an inverted uterus by Mr. Chevalier; then with remarks on the fillet; next with a list of cases in which the Cæsar operation has been performed in the British islands; and the Appendix closes with a specification of the deformities of the pelvis, and cases representing the effect of diet upon pregnant women.

Various excellent tables, pointing out the occurrences, extraordinary incidents, deaths, &c. to which the processes of pregnancy and parturition are liable, conclude the volume.

Our readers will, by this time, have formed a most favourable opinion of Dr. Merriman's Synopsis; but they must not be content with an analysis of a work, which it is impossible to epitomise. They must not fail to purchase it, as even the smallest medical library cannot be complete without it. The humble and economical shape of the work is no less entitled to our respect than the sentiments it contains; and we cannot too often repeat, that a due attention to this

circumstance would, in every instance, be alike beneficial to the author, the bibliopolist, and the public.

The humanity of Dr. Merriman in a department where so much is left to the mercy as well as judgment of the practitioner, is worthy the imitation of, and we hope, is duly appreciated by, all his pupils; and we are happy to find him so deservedly elevated, as to possess the means of diffusing, among a great proportion of the profession, superior instruction, joined with such Christian qualities, as will always distinguish the medical philosopher from the unfeeling, unreflecting, and barbarous empiric.

XII.

Practical Essays on Strictures of the Urethra and Diseases of the Testicles, including, Observations on Fistula in Perinæo and Hydrocele. Illustrated by numerous Cases and an Engraving; and prefaced with some Remarks on Life and Organization. By ROBERT BINGHAM, Fellow of the Royal College of Surgeons, London. Octavo pp. 357. 1820.

THE misery and fatality produced by diseases in the generative organs, invite us to examine every attempt designed to extend our knowledge and improve our practice in this department. Some of those which are peculiar to our own sex, are believed by the multitude, to be invariably the offsprings of vice, and the just punishment of moral depravity. Hence we find, throughout society, that less sympathy is extended towards these unfortunate sufferers, than any others. The disciples of Epicurus, however, are not the exclusive victims; and to compensate for the disadvantages of vulgar prejudice, these several afflictions have received the most profound attention from the wisest surgeons the world ever produced, namely, Hunter and Abernethy. Intellectual excellence, being the gift of Heaven, sheds its splendour on every object within the sphere of its influence: as the sun, which shines alike on the poor and the rich, the fool and the philosopher.

At first sight there does not appear to be much connexion between strictures in the urethra and remarks on life and organization; but as Mr. Bingham wishes to establish a certain theory, he has thought proper to introduce the latter subject, that he may unfold his views the more readily respecting the cause of structural derangements. He briefly, but ably, supports the doctrine of anti-materialism, and then observes,

“The mere life of every part depends entirely upon a constant supply of fresh blood, but the function of every part depends chiefly upon the supply of nervous influence. Hence we must conclude, that life produces all its partial or peculiar effects through the me-

dium of the nerves, which induces a further conclusion, that all local disease commences in morbid, nervous action." *Preface*, p. xiii.

ETIOLOGY. Three varieties of stricture are noticed by Mr. Bingham; the spasmodic, the permanent, and the mixed. Dissection enables us to discover other distinctions, which have been so often described, that we shall not stop to explain them here, being desirous of hastening to the author's theory of the disease. From the following passage, we conclude that he is not a convert to Mr. Charles Bell's doctrine of the non-muscularity of the urethra.

"It is well known, that nervous irritation in muscular parts, often occasions partial and obstinate contractions; and when this effect takes place in the urethra, I believe it constitutes, what is generally understood by the term, spasmodic stricture." P. 7.

He is disposed to think, that *nervous irritation* must always exist first, and that a permanent, is almost always preceded by a spasmodic, stricture. Some of what are called permanent strictures are, in his opinion, not occasioned by any alteration of structure, but by a closer and more compact texture of the fibres. In other instances, complete structural derangements are found resembling cartilage, which he supposes must be the result of a *peculiar, but inexplicable, morbid nervous action*.

The belief that stricture *always* proceeds from a venereal disease, is now very justly exploded by all well-informed surgeons. Irritating and astringent injections, we fear, are more frequently the cause of stricture, than is generally understood. We have lately been consulted by a gentleman, who laboured under most distressing *nervous irritation*, as Mr. Bingham calls it, in the urethra, testicles, and rectum, produced by one injection of green-tea infusion, and terminating in spasmodic stricture.

The passing of urinary calculi along the ureters or urethra, will sometimes occasion spasmodic stricture in the latter part; and we have a patient, who always knows that he has crystals of uric acid in his bladder, by a temporary stricture in the urethra. The earthy phosphates too, in our own practice, have always been accompanied by symptoms resembling stricture.

An abuse of the functions of the urethra appears to be the most common of all the causes of stricture, particularly in hot climates, where venereal excesses are common.

Disorders of the digestive organs, prostate gland, bladder, kidneys, &c. are also found to be frequent causes of stricture.

SYMPTOMATOLOGY. A contracted stream of urine is always attendant, and irritability of the bladder frequently to so great a degree, that the urine is discharged every hour, or oftener. The latter symptom, however, is common in old men, from a chronic inflammation of the prostate gland, and is aggravated by riding on horseback, by piles, and constipated bowels.

As in stricture of the rectum, so in that of the urethra, we often meet with a mucous discharge, which we suppose proceeds from a chronic inflammation in the mucous membrane.

Various sensations are produced in different degrees by stricture in the urethra; and sympathetic affections in contiguous and distant parts are connected with it. The disorders in the adjoining parts are well understood; those in distant organs have been less alluded to. The doctrine of the sympathies of the different organs may be said to have originated with Mr. Hunter; and it would be superfluous for us, if it were possible, to explain the benefit Mr. Abernethy has conferred on our art by his minute attention to the diseases connected with a disordered condition of the chylifactive viscera. This nosopoeitic influence of gastric derangements is perhaps more universally admitted than understood.

The symptoms of stricture being uncertain, our enumeration of them has been slight. When the disease is suspected, the only decisive proof we can have of its presence is to be obtained by a careful examination of the urethra by a bougie. For this purpose Mr. Bingham says, a large soft bougie should always be employed, which will receive the impression of the stricture, and point out its nature, extent, and situation. The soft bougie is prepared by immersing a common plaster-bougie a few minutes in warm water.

TREATMENT. To remove diseased actions, and to restore the morbid parts to their original state, are the grand objects to be had in view in the cure of stricture. Every thing found to aggravate the disease must be avoided, and particular attention must be paid to the stomach and bowels, the disorders of which will be found to affect the urethra both by contiguous and remote sympathy. With the view of preserving the parts in a state of quiescence, Mr. B. recommends.

“The minds of strictured patients to be kept as free as possible from venereal ideas.” P. 44.

We fear Mr. B. will find this a difficult matter, for stricture is usually met with at a period of life, when the passions are strong, and reason imperfectly matured.

The local means of cure may be divided into mechanical and chymical. Of the first kind are bougies, which are of four different species: the plaster, catgut, flexible gum, and metallic. We think with Mr. B. that in general they should be made conical for about an inch or an inch and a half, and then be continued of the same diameter to the other end. Catgut-bougies we conceive are dangerous instruments when used for the purpose of *dilating* a stricture; indeed a forcible dilatation ought never to be attempted. With respect to the metallic bougies, it must be observed that they are liable to break from frequent bending and other causes; and this accident happened to a metallic catheter in a patient of Mr. J. M. Coley's, at Bridgnorth, on whom he had operated for fistula in perinæo. The fractured part had been exposed as long as five or six weeks to an ulcerated surface, and seemed to be decomposed, acquiring a brittleness and scaly appearance. The portion which lay in the bladder remained sound. It broke off near the bulb of the urethra, and he extracted it by means of a piece of strong brass wire.

in the shape of a catheter, and introduced with the convex side towards the pubes. Mr. Coley recommends the catheter to be renewed every third week.

On some occasions Mr. Bingham employs a bougie, which, he says, possesses some good qualities peculiar to itself.

"This may be termed the hollow or compound bougie, as it differs in no respect from the flexible gum catheter, but in having no eye or aperture near its point. The various kinds of stilets which we may employ, give us great power of regulating the flexibility and strength of this instrument; and by withdrawing the stilet a little way, we shall obtain a flexible point of as much firmness as is desired." P. 59.

To facilitate the introduction of bougies, Mr. B. makes use of ceratum cetacei. They should also be warmed and softened, and the point bent a little upwards; but very small ones should be used cold, when it is necessary that they should retain any peculiar curvature. Large ones require to be bent nearly in the shape of a catheter, before they can be safely employed. When the point arrives at the stricture, we must make the most gentle attempts to convey it through the obstruction, removing from our minds the idea of *dilatation*, a term which, in our opinion, ought to be exploded from the young surgeon's nomenclature. If the bougie is too large, we must be satisfied with pressing its point against the orifice of the contraction; and, having waited a day or two, we may renew our attempts with a smaller instrument. On the approach of a bougie, every stricture takes on a spasmodic action, which often communicates to the urethra in front a disposition to contract. By withdrawing the bougie a little, a tendency to dilate is excited, and during this spontaneous dilatation, if the point be carefully propelled again, it will generally enter the obstruction. We have been thus minute, in order to impress on the inexperienced that the great secret in the use of bougies consists in stealing through the stricture by art and management, and not by endeavours to force a passage. By the conduct we have recommended and long practised, we are convinced that no accident can happen either to the urethra or bougie.

An expedient has occurred to Mr. B. similar to that adopted by Mr. Coley, and described in our last No. under the head, *White on Stricture in the Rectum*. Mr. B. thinks the canula, to convey the bougie down to the stricture, should be flexible; but he does not appear to have had recourse to it. When the contraction requires a very slender bougie, and the latter cannot be introduced without difficulty, we should certainly try the canula, which would defend the bougie from heat and obstructions, and conduct its point up to the very orifice of the stricture.

When the argenti nitras, one of the chymical means of cure, is made use of, Mr. B. advises it to be powdered and applied on the point of the bougie, which must be previously warmed. To guard the sides of the urethra from the caustic, the bougie is to be concealed within an elastic gum-canula. By the same apparatus, an ointment, composed of argenti nitr. from two to eight grains, and adeps, half

a drachm, may be brought into contact with the whole of the strictured surface. If the caustic has not been applied, care should be taken not to suffer the quantity of it to exceed at first two grains. Where the flexible canula cannot be had, a grooved bougie, the ointment being deposited in the groove, will form a substitute.

Mr. Bingham presents us with an account of the manner of preparing and using the bougie armed with kali purum; and concludes with sensible remarks on the *modus operandi* of the remedy, in which we coincide. He has not found it produce any better effects than the potassæ subcarbonas; which may be applied by means of the elastic gum-canula, like the argenti nitras. By some mistake the term *potassa* subcarbonas occurs constantly in Mr. Bingham's book instead of *potassæ* subcarbonas. Three cases are introduced to exhibit the good effects of this application. Sodæ subcarbonas exsiccata and sodæ carbonas have also been tried in stricture; and their operation has been similar to that of the subcarbonate of potash. Three cases, in which the sodæ subcarb. exsic. was used, are added.

Another auxiliary to the bougie, which Mr. B. believes has never before been employed for the cure of stricture, is strongly recommended by him. It is the ung. hydrarg. fort.

"The manner of applying the unguentum hydrargyri fortius is to smear it upon the bougie, and to pass it through the stricture, where it may be allowed to remain for a longer or shorter period, according as it is wished to exert more or less influence.

"Sometimes it produces no sensation different from that which the bougie alone would excite: at other times, patients have told me it felt warm, and sometimes very warm, but never amounting to painful sensation." P. 179.

Mr. B. was first led to try this remedy from observing its infallibly good effect when applied to phymosis, which he believes to be of the same nature with some urethral strictures. He thinks it merits the preference before all other expedients in strictures impenetrable to a bougie, although open for the discharge of the urine.

Cold or tepid hip-baths may be useful, if properly adapted to the age and constitution of the patient.

In the observations on *fistula in perinæo* and on *false passages* in the urethra, nothing new or particularly interesting occurs. The species of the former disease described by Mr. B. appear to be of a comparatively mild and chronic nature. There is a most formidable kind of disease, which we have frequently met with, occurring in the perinæum. It begins with a small, hard lump in the urethra, which is either painful or smarts after every discharge of urine. In a few days it acquires a larger size, and feels as hard as astone. By degrees it becomes a little diffused: the urine has escaped into the corpus spongiosum urethræ. At the end of a week an erysipelatous tumefaction spreads about the scrotum and penis; irritative fever of the worst kind commences; and vesications and mortification follow. If the experienced surgeon is called in at this crisis, he cuts through the smaller integuments down to the abscess; he plunges his knife deep a second time, and matter and urine burst

forth with an intolerable fœtor. The catheter is now to be introduced twice or three times a day, and, the sloughs having separated, the wound is to be healed by proper dressings. Towards the last, the hydr. oxymur. in the form of lotion, is an excellent application to stimulate the fistulous aperture. When severe and frequent *rigors* occur after the sloughing process is complete, we suspect matter is forming in the prostate gland; and if the pulse is at 130, and delirium and carphologia are present, the case will terminate unfavourably. These rigors, which are often followed by a hot and perspiring state, are to be distinguished from idiopathic fevers by the frequency and irregularity of their occurrence.

Hernia humoralis produced by sympathy with stricture is often speedily removed by the introduction of the bougie. We suspect that few strictures are found unconnected with some affection of the testis. Most of our own patients have had a small hard tumour on the epididymis, and occasional tumefaction in the spermatic chord. These symptoms, together with pain in both those situations, often continue many years, before the cause of them is discovered. The bougie removes both the stricture and its consequences.

Mr. B. informs us that Mr. Ridgway cures his patients, who have gonorrhœa and *hernia humoralis*, with an injection of *argenti nitræs*, which is prepared by dissolving from ten grains to forty in an ounce of distilled water. It must be used with an ivory syringe, and not thrown further than four inches, nor repeated oftener than twice a day.

Mr. Bingham's book closes with some remarks on *suspensory bandages*, and on *hydrocele*. As an improvement in the former, he recommends soft leather in preference to linen or calico. In speaking of hydroceles, he says, he is persuaded that there are some cases, in which an operation is unnecessary. We think so too, and in our own practice we have been able to cure every case of infantile hydrocele by the daily application of linim. hydrarg. comp. This plan, however, does not succeed with adolescents or adults.

Mr. Bingham's book will be found useful to the young and inexperienced, and interesting to those, who make the cure of strictures their principal study. The practice he recommends is safe, his speculations are ingenious, and on the whole his work displays considerable talent. Before he publishes his essay on the prostate gland, from which we expect much information, we advise him to reduce it into the smallest compass consistent with perspicuity. His language is good, but his style is rather diffuse; and every one knows that what is gained by expansion is lost in force.

“Quidquid præcipies, esto brevis: ut cito dicta

“Percipient animi dociles, teneantq. fideles.”

2. *Horatii Flacci de Arte Poet. Epis.*

The style of Celsus is well worthy the study of those who wish to obtain credit, or to establish facts by medical writings. The great art in pleasing our fastidious palates in this Augustan age consists in supplying us with such literary food, as will not alarm us by its quantity, nor by its flatulent quality produce indigestion or the vapours.

XIII.

Pharmacologus; or the History of Medicinal Substances, with a view to establish the Art of prescribing and of composing Extemporaneous Formulæ, upon fixed and scientific Principles; illustrated by Formulæ, in which the Intention of each Element is designated by Key Letters. By JOHN AYRTON PARIS, M.D. F.L.S. M.R.I. Fellow of the Royal College of Physicians, &c. &c. &c. *Fourth Edition*, much enlarged. One Vol. Octavo, pp. 580. London, 1820.

OUR review of the *third* edition of this work was scarcely out of the press, when the edition itself was out of print. Now, while we admit that some medical works of real merit are passed over by the public, without notice, and suffered to remain in obscurity; yet we believe that there is not a single instance on record, at least in modern times, of a strictly medical work going through three or four editions, and thus receiving public approbation, without possessing intrinsic merits. If the above position be correct, (and we believe that no unbiassed observer will question its correctness) Dr. Paris's work is stamped with the authentic and irrevocable seal of merit. We have, therefore, but to announce this new, and greatly enlarged, as well as improved edition; and allow things to take their natural and regular course.

This edition is dedicated in a tone of manly friendship and fine feeling, to Dr. Maton, who is justly represented as earnest "in upholding the dignity, and encouraging the legitimate exercise of our profession"—a physician eminently enlightened in natural history, and, consequently, capable of justly appreciating the importance of its applications to medicine; while the extensive practice which his talents and urbanity so deservedly command in this metropolis, must, long since, have taught him the full extent of that empiricism, which it is Dr. Paris's endeavour to expose, and that ignorance which it is his object to enlighten.

Would to God that all the members of a liberal and enlightened profession thus acted and felt towards each other! It is in vain for us to expect the perfect esteem of the public till we determine to respect ourselves, and act honourably towards others.

It was our intention to have noticed some of the numerous additions and improvements in this edition, but we find that a long article would give but a very imperfect view of them, and the limits of this Number of the Journal are already far exceeded. The rapidity with which the work is now flowing through the various ramifications of the profession, renders all delineation of its contents a work of supererogation.

————— quo non aliud velocius ullum
Mobilitate viget, viresque acquirit eundo.

XIV.

EXTRA LIMITES.*

DR. JOHNSON'S REPLY TO CERTAIN LIBERAL REVIEWERS.

"Sed vident ingratos, intabescuntque videndo,
"Successus hominum_____"

WHEN a man is violently assailed by those who are his competitors for public favour, and covered with all kinds of abuse and obloquy, it is a pretty significant symptom of his prosperity, and of the flourishing state of his undertakings, whatever they may happen to be. I could not, therefore, be very much dismayed, in beholding a storm of the lowest ribaldry poured upon me by Drs. Hutchinson and Reece, in the *Medical and Physical Journal*, and in the *Gazette of Health*. That I have escaped the humiliation of being praised in the *Gazette of Health*, must afford satisfaction to all those who wish me well—and that I have not much to dread from the vituperation of the *Medical and Physical Journal*, will be readily granted by those who read that work, and who remember that only two short years ago, I was there stated "to possess a strong claim upon the approbation and esteem of the professional public:"—while the *same work* which is *now* so reviled and ridiculed, was *then* executed—"in a most interesting and satisfactory manner." Before proceeding farther, I shall lay before the public a few specimens of the *Medical and Physical* reviewing.

(No. 1.) 1818.

"In the 4th section, our author enters, first on the consideration of *hepatitis*, of the symptoms of which, he traces all the occasional irregularities with so masterly a hand, that, though his treatment be regulated, it is by no means common, and is entitled to serious attention."—*Med. and Phys. Journ.*

☞ Compare this with No. 3, a judgment on the same section of my work.

(No. 2.) 1819.

"In this discussion on the balance of enjoyment and suffering in the different gradations of society, the author, *already so well known and favourably regarded by the profession*, has adduced, in a concise

* The *extra limites* department was originally opened for the purpose of giving authors an opportunity of explaining misapprehensions, or of defending themselves against what they might conceive to be, unjust criticism in this, as well as other Reviews. As the public must not be charged with these defences, authors are hereby informed, that the expense of insertion is *nine shillings per page*, the exact prime cost of paper and printing. All the control exerted, is over language that might be deemed derogatory to science, or beneath the dignity of the profession

form, many interesting and important observations and reflections, &c. &c.

"One of the most marked characteristics of the whole of Dr. Johnson's works, is derived from a view which he has taken of the system, that, if Darwin be excepted, had, until lately, been but little attended to by English pathologists, &c.

"Now, although this doctrine is not original with Dr. Johnson, yet he has the merit of having displayed it *with accuracy* and precision, and of having discovered many of its laws. This is shown in his work on Tropical Climates, and on *Atmospheric Influence*. We find, too, much interesting matter respecting it in the work before us. It would not be possible to give an adequate view of it in an abstract, and the work itself is drawn up in so concise a manner, as not to admit of an analysis occupying much less space than the original." *Med. and Phys. Journal*, Oct. 1819.

(No. 3.) 1820.

"On the subject of *hepatic diseases*, the author, as on all other occasions when he does not utter *absurdities*, is a mere compiler, and we cannot compliment him on doing this easy duty with much judgment, as he generally selects for his assertions just those which stand most in need of proofs. He takes every thing for granted, which suits his convenience; and if he wanted any thing else, *he would not hesitate to assume it*." *Med. and Phys. Journal*, October, 1820.

It is well known that the critiques of 1819 and 1820, at least, were penned by the *same individual*, and I cannot but envy that individual the luxury of his feelings, on seeing these amiable specimens of his strict integrity, sail on the four winds to every habitable country of the globe.

There are some minor examples of the Reviewer's consistency and veracity scattered through this critique, which cannot fail to entertain the public. Thus in the *first* page of the review, it appears that my work dropped stillborn from the press, and was sold by the hundred weight for waste paper; but by the time the critic had got to the *last* page of his review, the work had got to a *third edition*, and was become very profitable to the booksellers! Really the powers of this critic's pen far exceed those of Merlin's wand and harlequin's lath, in transforming every passing object into all the shapes of an evening cloud, and with all the evanescence of an imaginary creation.

Some people may be curious to learn what crime I can have committed, in this short interval, between the critiques, to forfeit my claim upon the approbation of my brethren, and produce this sudden change in the sentiments of my judges. My crime is of a very deep die, and never, I fear, to be forgiven. In 1818, the author of the work traduced resided in a provincial town, and manifested no symptom of rivalry. Then he was a very deserving man, and his work was excellent. But having had the audacity to present himself before the public as the conductor of a quarterly journal, he is suddenly transformed to an ignoramus, and his work, so lauded before, is consequently changed into a tissue of absurdities, from alpha to omega!

Nay, at a still more recent period, as the specimens will show, and before the rival journal emerged from infancy, or occasioned alarm in the breast of the liberal reviewer, *this same reviewer* did, in his critique on "*Civic Life*," represent the author as *directly the reverse* of what he *now wishes* to make him appear.

"All this, (as Dr. Wilson Philip observed upon a similar occasion, and to the same individual) would be quite amusing, were not so gross a violation of the implied compact between a reviewer and the public, too grave a subject for merriment."—*Dr. Philip's Correspondence*. One thing, however, is amply proved by these transactions—The utility of this same competition in periodical journals, and the necessity that existed for an ANALYTICAL REVIEW, governed by some principle of justice, and manifesting some regard for truth. Nothing can be more clear than that the patronage which such a review has experienced from the profession, is the real and secret cause of this torrent of abuse from those who considered themselves possessed of an hereditary and exclusive monopoly in this branch of medical literature.

The Medical and Physical Reviewer has, I am told, stated his determination to write me down, through the medium of the two vehicles above-mentioned; for no one fails to perceive the identity of the writer in both. I would recommend to his perusal the following passage in the September No. of the *Journal Complimentaire des Sciences Medicales*. "*Il serait à désirer que l'on bannit pour toujours des écrits relatifs aux sciences ces expressions injurieuses qui n'ajoutent rien à valeur des argumens, et qui jettent toujours de la défaveur sur les hommes qui les emploient.*" P. 249.

But to come to some particulars. One would have supposed, that after Dr. Wilson Philip's detection of the misrepresentations and perversions of the Medical and Physical Journal,* the writers in that work would have been a little cautious, at least for a time, of laying themselves again open to public conviction. But that castigation seems to have had only a very temporary effect. Under the prospect of a two months' exemption from exposure, a new review of my work has been put forth, consisting of an uninterrupted chain of garbled quotations, misrepresentations, and perversions. It will hardly be expected that I should follow this enraged Reviewer through all his effusions of envious and jealous feeling; or seriously reply to his ribaldry and ridicule. I shall not be so unwise as to leave the 'vantage ground which I possess, and descend into the arena of abuse, where, in truth, I should stand very little chance of success, with adversaries so well trained to that mode of warfare. I shall merely lay before the public a few specimens of this mode of reviewing, that cannot but have the effect of rousing the attention of every man of reflection towards a practice which but ill accords with the dignity of science and literature, and on the contrary, which is admirably calculated to degrade the profession itself in the eyes of the public at large.

* See the 8th No. of the Medico-Chirurgical Journal, p. 688, *et seq.*

At page 326 of the journal, in order, I imagine, to make me guilty of something like an absurdity, in supposing a fluid to be stagnant and *oozing* at the same time, the Reviewer coolly adds the *oozing* part himself, and then marks it in *italics*, to render it more conspicuous. The original words (page 73 of my 3d edition) are—"The stagnant blood occasionally finds its way into the intestines, &c." which the reviewer states thus: "The *stagnant* blood, *oozing* from the liver, finds its way, &c." thus gratuitously throwing in the words, "*oozing* from the liver," in contradistinction to its *stagnancy*! It is true that I have made use of the word "*oozing*;" but then it was in the *dissection* of a gorged liver, where blood *oozed* from all points, "at each cut of the scalpel." Such trifling amalgamations of dead and living matters are nothing, it seems, in the refulgent flashes of this gentleman's witty criticisms.

In page 324, the Reviewer's wit knows no bounds. "The author, says he, has forgot to *exclaim* how *remarkable* it is for an *inclination* to *stool* to take its seat in the *stomach*, and then fly to the *chest*." It would be much more natural for me to exclaim how *remarkable* it is that a Reviewer, who pretends to impartiality, cannot read a single passage without misrepresenting its meaning. I never stated that the *inclination* to *stool* flew to the stomach and chest, but that the *irritation* which produced it, did so, as any man of common apprehension and impartiality would construe the sentence. "The first warning symptom (in spasmodic asthma) is often a sudden inclination to stool, or intestinal *irritation* which quickly shifts its seat to the stomach, and then flies to its favourite station, the chest."

In the same page of the Journal, my total ignorance of all pathological matters is demonstrated in the following manner. I am there stated to assert, that "disorders of the internal viscera, as the liver, stomach, &c. are not inflammatory, *unless produced by climate*." If the reader will take the trouble to turn to the passage in my work, he will probably be surprised, (if any thing can surprise him on this occasion) to find that I have stated just the *reverse* of the above; namely, "that those disordered states of the stomach, *resulting from atmospherical impressions on the surface*, do not often partake of an inflammatory nature." P. 28, 3d Edit.

What will the profession think of a public journalist who can thus deliberately reverse the sentiments of an author, in order to hold up these his misrepresentations to ridicule? No author's character is safe, while such reviews are countenanced. And if a reviewer will publicly send forth such calumnies against a man who has the means of circulating their antidote to a far greater extent than the poison can reach, what protection has the defenceless victim of slander and misrepresentation, in the hands of such unprincipled critics? It is high time for the public to look to this.

The whole critique, in fact, is a tissue of this kind of misconstruction or misrepresentation.* But the Reviewer has suffered himself

* I appeal to a writer, whom the Reviewer will not accuse of partiality, for the truth of this assertion. The Medical Intelligencer of last month passes the following sentence on the critique in question:

to be carried forward with such impetuosity by these passions, that he exposes his lack of knowledge or principle at every step. Thus the universally well known experiments and observations of Bichat and Saunders on the biliary secretion and digestion, are triumphantly held up to derision as *my fancies*, for which it would be as vain to look for *evidence*, "as to expect blood from a flint." Yet these *fancies* are the direct results of ocular demonstration and of reflection, recorded by the above-mentioned authors—authors whose works the medical and physical Reviewer surely must be acquainted with. Certain citations, too, which I have made from Laennec, *an author recently reviewed by the critic himself*, are held up to public ridicule as *my puerilities*. In short, the above and other late criticisms have exemplified all that ever was set down, even in caricature, of the license of some critics. No one will deny, after this, how necessary is a reform in this department of medical literature. The eyes of the public, indeed, must now be open to the shameful delinquencies of the journal in question, whose conductors are certainly taking the most effectual means of advancing the interests of those journals of which they are so thoroughly jealous.

It is thus that malice often overacts its part, and injustice works its own downfall. Henceforth let no man plume himself with the praises of the Medical and Physical Journal, or clothe himself in sackcloth and ashes at being condemned by a tribunal remarkable only for its utter disregard of truth and total want of judgment.

I shall next proceed to prove this reviewer guilty of the most illiberal misrepresentation that can well be imagined. He states at page 325, that the instruction given by me in dysentery, two years ago, in the second edition of my work, was—"the exhibition of submuriate of quicksilver, in scruple doses, twice or three times a day, without any other medicines." He insulates this passage and carefully suppresses both what precedes and follows it. *Preceding* it I have distinctly stated that—"the practice I would recommend, from much experience, is, the introduction of mercury, in comparatively small doses, either alone or combined with an opiate, or, which is preferable, with an opiate and diaphoretic," &c. p. 46. The passage *itself* I have stated thus:—"I am now to mention a practice which in some cases of emergency, I tried with unexpected success (in the East-Indies) and which was tried by a few others, without any communication of ideas, and with similar results. It consisted in the exhibition of submuriate," &c. 2d ed. p. 47. *Succeeding* this passage the reader will find it thus:—"I may add that I have, in several instances, pur-

"The pages of literary history have been too often stained by the passions or prejudices of opposing minds; but such "*damned spots*" ought not to be multiplied at a period when the progressive increase of knowledge requires a correspondent liberality of sentiment. Whatever provocation the learned and able editor of this (the Medical and Physical) Journal may have felt, this we wish, that he had not inserted (he might have said *written*) this review, which in exaggerating the faults, and omitting the excellencies of Dr. Johnson's work, does not, we conceive, fulfil the purposes of legitimate criticism."

sued the same plan in dysenteric cases in this country, with much felicity of result. I did *not* indeed adopt this practice generally, being quite satisfied, in ordinary circumstances, with the plan before detailed. But whenever I had occasion to push boldly on for ptyalism, in cases where time appeared extremely precious, and when the symptoms were such as indicated the danger of rapid destruction of organization internally, I hesitated not to exhibit calomel in scruple doses, &c." P. 48.

I believe the annals of literature could not afford a more flagrant breach of justice, or a more garbled misrepresentation, than the reviewer has here set forth to the public. But the profession are not destitute of discernment, and they will easily appreciate the tenor and object of such reviewing.

It is only necessary further to state, that this section on dysentery, in the second edition of my work, being a literal transcript, or nearly so, of that in my work on tropical climates, I carefully revised it in the third edition, and adapted it, as stated in the preface, as nearly as I could to the climate in which we live. In a new edition of my work on Tropical Climates, now in the press, the original passages stand as they were first written, for I have no occasion to alter facts, or blot out a single line of what I set down from observation or conviction.

And here I may observe, that this experienced reviewer has not thought proper to attack a single doctrine or practice in my whole work, by fair argument; and that the only weapons he uses are those of ridicule, founded principally on falsified quotations.

In parting with my liberal, impartial, and veracious Reviewer, I cannot help condoling with him on the tone of pathetic lamentation with which he concludes his elegant diatribe. It appears that the intellect of the profession is labouring under a temporary hallucination; that some writers have got the ear of the public who are absolutely below mediocrity; while the productions of others—men of sublime talents—"superior workmen," are suffered to pine in obscurity, though a future age will do them justice, and must be astonished at *their* genius, and the want of discrimination in the public! This is really a melancholy sign of the times. Only think how provoking it is, that the profession should perversely remain insensible to the transcendent merits of the Medical and Physical Journal, and to the Bæotian stupidity of the Medico-Chirurgical Review.

But I would recommend my friend the Reviewer to have courage and perseverance. Repeated effusions of such edifying criticisms as he has lately produced,* must ultimately attract universal attention to the unfathomable sources of knowledge, probity, candour, and impartiality, whence they flow. In charity towards my incapacity the Reviewer has *disinterestedly* advised me to write no more. In profound admiration of his splendid talents, and distinguished liberality, I earnestly exhort him to write on. He cannot confer a greater obligation on his humble servant,

JAMES JOHNSON.

* See Dr. Halloran's letter, in the 8th article of this number; Dr. Philip's detections, &c. &c.

MISCELLANEOUS INTELLIGENCE.

Mr. SWAN, surgeon to the Lincoln Hospital, has in the press, an account of a new method of making dried anatomical preparations so as to present the same appearances as a fresh subject when first dissected. *Second Edition, enlarged.*

Dr. M'CARTHY's communication on Enteritis is transmitted to the Editor of the LONDON MEDICAL REPOSITORY, as our plan forbids us inserting original papers. It will afterward be noticed in our *Supplemental Review*, when glancing at the original departments of cotemporary journals.

We are informed by our friend and correspondent, Dr. JAMES KENNEDY, of Dunning, in Perthshire, that the Cæsarian operation has been performed in that neighbourhood a few weeks ago. The child is saved, but the mother died twenty-two hours after the operation. It must be recollected, however, that in this, and probably in most other cases in this country, the operation was performed at too late a period. The woman had been exhausted by seven days labour.

Some cases of bronchocele have been lately treated by seton, in this country, the plan recommended by Dr. QUADRI of Naples, and with success.

Dr. QUADRI found, by repeated dissections of goitres, that the ramifications of the thyroid arteries, in the diseased gland, were always very small, and consequently, the danger from hæmorrhage was quite imaginary.

Books received for Review since last Quarter.

1. *An Historical Account of St. Thomas's Hospital, Southwark.* By BENJAMIN GOLDING, Member of the Royal College of Surgeons, London, &c. &c. One vol. small octavo, pp. 245. London, 1820.

□ This account, drawn up with great learning, research, and apparent fidelity, cannot fail to prove highly interesting to all those who have received their education at, or are otherwise connected with, the venerable and useful Institution above-mentioned.

2. *Report on the Epidemic Cholera Morbus, as it visited the territories subject to the presidency of Bengal, in the years 1817, 1818, and 1819.* Drawn up by order of the Government, under the superintendence of the Medical Board. By JAMES JAMESON, assistant surgeon and secretary to the Board. One vol. octavo, pp. 325. Calcutta, 1820.

□ For this interesting report we are indebted to Mr. William Evans, of the Royal Navy, lately returned from the East. Some account of it will be seen in the present No.

3. *Remarks on the Importance of the Medical Profession, and on the present State of Medical Practice in Ireland.* By RICHARD GRATTAN, M. D. Fellow and Censor of the College of Physicians, Ireland. Octavo. Dublin, 1820. Parts I. and II. P. 70 and 50.

4. *Elements of the Theory and Practice of Physic, designed for the use of Students. Part 1. including the Symptoms, Pathology, and Treatment of Acute Diseases.* By GEORGE GREGORY, M. D. Licentiate of the Royal College of Physicians, London, and Senior Physician to St. George's and St. James's Dispensary. One vol. octavo, pp. 401. London, 1820.

☞ See our present No. p. 435.

5. *Lectures on the Structure and Physiology of the parts composing the Skeleton, and on the Diseases of the Bones and Joints of the Human Body, preceded by some Observations on the Influence of the Brain and Nerves, delivered before the Royal College of Surgeons of London, in the Summer of 1820.* By JAMES WILSON, F. R. S. &c. &c. &c. One vol. octavo, pp. 414. London, 1820.

☞ See our present No. p. 427.

6. *The Principles of Midwifery; including the Diseases of Women and Children.* By JOHN BURNS, C. M. Regius Professor of Surgery in the University of Glasgow, &c. Fifth edition, enlarged, pp. 755. London, 1820.

7. *A Synopsis of the various kinds of difficult Parturition, with practical Remarks on the Management of Labours. Third edition, with considerable additions, and an Appendix of illustrative Cases and Tables.* By S. MERRIMAN, M. D. F. L. S. Lecturer on Midwifery, &c. &c.

☞ See page 526 of this Number.

8. *On the Elasticity of the Lungs.* By JAMES CARSON, M. D. Quarto, pp. 16, with a plate. (From the Philosophical Transactions.) London, 1820.

9. *A Treatise on the Plague, designed to prove it contagious, from facts, collected during the Author's residence in Malta, when visited by that Malady in 1813. With Observations on its Prevention, Character, and Treatment; to which is annexed an Appendix, containing minutes of the Author's evidence, given before the Con-*

tagion Committee of the House of Commons, accompanied by their Report. By SIR ARTHUR BROOKE FAULKNER, M. D. Fellow of the Royal College of Physicians, &c. &c. One vol. octavo, with plans, pp. 412. London, 1820.

10. An address to Persons afflicted with Deafness, particularly the obscure cases, denominated Nervous Deafness, with Comments, &c. By W. WRIGHT, Surgeon-Aurist in extraordinary to Her late Majesty. One vol. small octavo, pp. 97. London, 1820.

11. Memoires sur la fièvre jaune, considérée dans sa Nature et dans ses rapports avec les Gouvernment. Par N. V. A. GERARDIN, de Nancy, Docteur en Medecine, &c. Octavo, pp. 91. 1820. Transmitted by M. Breschet.

12. De la Goutte et des Maladies Goutteuses ; to which is added, Recherches Pratiques sur le RHEUMATISME, traduit de l'Anglais de James Johnson, M. D. Auteur de l'ouvrage intitulé—“ *Influence of Tropical Climates on European Constitutions* ;” et Redacteur du “ *Medico-Chirurgical Journal*.” Par J. N. Guilbert, M. D. One vol. octavo. Paris, 1820.

13. An Essay on Mineral, Animal, and Vegetable Poisons, in which the symptoms, mode of treatment, and tests of each particular poison, with the general morbid appearances on dissection, are concisely detailed. To which is added, an Account of the Means to be employed in cases of suspended Animation. Small duodecimo, pp. 67, with ten plates of the poisonous plants. 1820.

☞ *This appears to be a convenient pocket companion, as the toxicological chart is a tenant of the shop or library.*

14. A Chymical and Medical report of the Properties of the Mineral Waters of Buxton, Matlock, Tunbridge-Wells, Harrogate, Bath, Cheltenham, Leamington, Malvern, and the Isle of Wight. By CHARLES SCUDAMORE, M. D. Member of the Royal College of Physicians, &c. One vol. octavo, pp. 265. London, 1820.

15. A few Hints relative to Cutaneous Complaints. By T. M. KELSON. A new edition, with some Remarks on the Nature and Functions of the Skin. By C. KELSON, Member of the Royal College of Surgeons, &c. Octavo, sewed, pp. 31, 1820.

☞ *These “few Hints” relate to a secret method of curing Diseases of the skin. We have nothing to do with such works.*

16. **AMERICAN MEDICAL RECORDER**, for January, April, and July, 1820 ; conducted by JOHN EEBERLE, M. D. &c. assisted by several eminent practitioners ; in exchange for the **MEDICO-CHIRURGICAL REVIEW**.

17. **New-York Medical Repository**, up to June 1820, in exchange for **MED. CHIR. REVIEW**.

18. **Revue Medicale, Historique et Philosophique**, No. IV. for July, 1820, and No. V. for September, in exchange for **MED. CHIR. REVIEW**.

19. **Journal General de Medicine, &c.** for 1820, up to September. In exchange for the **MED. CHIR. REVIEW**.

20. **Pharmacologia ; or, the History of Medicinal Substances**, with a view to establish the art of prescribing and of composing extemporaneous formulæ, upon fixed and scientific principles ; illustrated by formulæ, in which the intention of each element is designated by key letters. By JOHN AYRTON PARIS, M. D. F. L. S. M. R. I. Fellow of the Royal College of Physicians of London, &c. &c. One vol. octavo, pp. 580, *fourth edition*, much enlarged, London, 1820.

21. **Views of the Muscles of the Human Body**, drawn from Nature, and engraved by George Lewis ; accompanied by suitable explanatory references. Designed as a guide to the student of anatomy, and a book of reference for the medical practitioner. *One volume, quarto, containing eighteen plates, price 1l. 11s. 6d. boards. Highly, 1820.*

The Author dissected as an Artist, and his delineations appear to us to be very correct and expressive. Among the subscribers to this Work, we see the very respectable names of Abernethy, Brodie, Brookes, Cline, Carlisle, Astley Cooper, Earle, Grainger, Guthrie, Green, Latham, Lawrence, Monro, Mayo, Powel, Stanley, Taunton, Travers, Uwins, Wilson, &c. We need not say that these names confer respectability on any work to which they are prefixed.

22. **Considerations et Observations Anatomiques et Chirurgicales sur la Formation, la Disposition, et le Traitement des Fistules Stercorales, et des Anus-Contre-Nature.** Par GILBERT BRESCHET, Docteur en Medecine. Chef des Travaux Anatomiques de la Faculté de

Médecine de Paris, premier Aide de Clinique à l'Hôtel-Dieu, &c. &c. Paris, 1820. In manuscript. Première partie, 77 pages.

This important manuscript has been presented to us by our able and esteemed friend, M. Breschet, anterior to its appearance in France. The plan of our Journal not admitting original communications, we have presented it to our able and respected cotemporary, "*the Quarterly Journal of Foreign Medicine and Surgery*," after its publication in which we shall prepare an analysis of it for our Supplemental Review.

23. Outlines of Midwifery, developing its principles and practice; with twelve lithographic engravings. By J. T. CONQUEST, M. D. F. L. S. Member of the Royal College of Physicians; Physician-Accoucheur to the City of London Lying-in Institution, &c. &c. One vol. duodecimo, pp. 193. London, 1820.

24. A practical Treatise on the Diseases of the Eye. By JOHN VETCH, M. D. F. R. S. E. Member of the Royal Medical Society of Edinburgh, and the Medico-Chirurgical Society; lately Physician to the Forces, and principal Medical Officer to the Ophthalmia Military Hospital. Octavo, pp. 266, and three coloured plates, London, 1820.

25. General Elements of Pathology. By WHITLOCK NICHOL, M. D. M. R. I. A. F. L. S. of the Royal College of Physicians, London, &c. One vol. octavo, pp. 234. London, 1820.

26. Synopsis Nosologica Morborum, quibus Infantes ac Pueri tentantur, Legibus Physiologicis recensita; et in Noscomii Regalis ad Morbos presertim Puerorum debellandos. Ab AUGUSTO B. GRANVILLE, M. D. S. R. S. Statuta in the form of a Chart. 1820.

27. The New-England Journal of Medicine and Surgery, and Collateral Branches of Science. Conducted by a number of Physicians. New Series, No. IV. Vol. IV. for October, 1820. In exchange for MED. CHIR. REVIEW.

28. A Sketch of the Physiology and Pathology of Urine; with an historical Introduction. By JONATHAN OSBORNE, M. B. T. C. D. Licentiate of the King's and Queen's College of Physicians in Ireland. Octavo, pp. 81. London, Nov. 1820.

29. Practical Observations on the Colchicum Autumnale, as a general remedy of great power, in the treatment of Inflammatory Diseases, both Acute and Chronic; and therefore as a substitute for

bleeding in disorders which are connected with increased action of the heart and arteries. By CHARLES THOMAS HADEN, Esq. Surgeon to the Chelsea and Brompton Dispensary; late Surgeon to the Derbyshire General Hospital, &c. One vol. octavo, pp. 84. London, November, 1820.

30. Copy of the Report to the Secretary of State for the Home Department, dated 20th May, 1820.

This Report came too late, and is too long, for insertion in a REVIEW; we shall, however, present an abstract of it in our next number. Edit.

31. An Historical and Practical Treatise on the Internal Use of the Hydro-cyanic (Prussic) Acid, in Pulmonary Consumption and other Diseases of the Chest; as well as in several Complaints attended by great Nervous Irritation or Acute Pain; with full directions for the preparation and administration of that medicine; and a preliminary descriptive account of the principal diseases in which it has been employed—illustrated by numerous cases. SECOND EDITION, greatly enlarged. By A. B. GRANVILLE, M. D. F. R. S. F. L. S. M. R. I. Physician in Ordinary to his Royal Highness the Duke of Clarence; Member of the Royal College of Physicians; Principal Physician to the Royal Infirmary for the Diseases of Children; and Physician-Accoucheur to the Westminster General Dispensary. One vol. p. 417. London, November, 1820.

To the authors of the foregoing works we return our best thanks, and beg to say, that such as are not reported on in the present No. are placed in proper hands for speedy analysis. No work of importance that appears in this country shall fail to be carefully analyzed in this Journal with all possible despatch.

And here we are induced to make a remark or two in answer to an objection that has been thrown out against extensive analyses of medical works. The above list contains the titles of those works *only* which have been transmitted to us for review since last quarter. Many others have been published within the period stated. Now we ask this question; is there more than one in twenty of the readers of this journal, whose opportunities, leisure, or finances can extend to the purchase and perusal of the various works that issue from the medical press? We believe there is not one in fifty. And if this be the case, can the utility or importance of an Analytical Review, on a scale commensurate with the state of medical literature, be called for a moment in question? But we will go farther, and ask yet another question. Does not that twentieth or fiftieth person, who carefully peruses *all* medical works, find it very convenient to have also a concentrated analytical record of them, in a shape and size that may offer facility of re-perusal, and materials for reminiscence? We leave the answer to our readers.

We have been requested by Dr. Mott to give publicity to the following passage :—

Further Remarks on the Case of Ligature of the Arteria Innominate. By VALENTINE MOTT, M. D.

In my first account of this case, it is stated that, "*the subclavian artery, internally and externally to the disease, was pervious.*" To this it may now be added, that where the artery opens into the ulcer left from the wound of the operation, it appears not only pervious, but of the natural size, and the coats free from any diseased appearance. Externally towards the axilla the artery is somewhat enlarged in diameter, but exhibits no appearance of disorganization of its coats either externally or internally. About an inch from the ulcer, or just as the artery has passed between the scaleni muscles, there is an irregularly shaped elliptical opening upon its upper side, large enough to receive the extremity of the fore-finger. The edges of this opening are jagged and uneven, and the surface of the artery internally is of a brownish yellow colour, to the extent of half an inch on the inside of the opening, and more than an inch towards the axilla. The internal coat of the artery has a rugous or puckered appearance, separated a little from the muscular coat, very friable, and evidently in a degenerated state. This opening of the artery communicates directly with the anterior extremity of the sac, which contains coagula; and upon removing these, the surface of the sac is seen puckered or thrown into a great number of little folds, giving it at first sight the appearance of containing a number of holes. This account is taken from the morbid parts before me, and the preparation has been seen and examined by Dr. Post, Dr. Hosack, Dr. Watts, Dr. Stevens, and others, who have authorized me to state that they are satisfied of its aneurismal character.

We are happy to learn that Drs. Paris and Harrison are now delivering lectures on the *materia medica*, therapeutics, and pathology, which are likely to prove very advantageous to medical students in the West end of the town. We have had an opportunity of observing the mode in which the subjects are discussed, and we are of opinion, that the plans adopted by these gentlemen conduce much to the facility of acquiring pharmacological, therapeutical, and pathological knowledge.

In the press, a new (being the third) edition of Dr. Johnson's work on Tropical Climates. The diseases of the *Western* hemisphere will be investigated with great minuteness, and all the light which the last twenty years have elicited respecting them, will be collected into a focus in this edition. A physician of great talents, and long resident in the West Indies, is assisting the author in arranging and enriching this enlarged division of the Work. Great and important additions will be made to the *Eastern* division, and the whole Work is undergoing a thorough revision. It will be published in February, 1821.

JAMES V. SEAMAN,

NO. 296 PEARL-STREET, NEW-YORK,

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Bard's Compendium of Midwifery, 8vo. with plates.
Brodie on the Joints, 8vo. with coloured plates.
Baudelocque's Midwifery, with Notes, by Dewees, 8vo. with plates.
Boyer's Surgery, 2 vols. 8vo. with plates.
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Dorsey's Surgery, 2 vols. 8vo. with plates.
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Denman's Introduction to the Practice of Midwifery, with Notes by Dr. Francis, 8vo. with plates.
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(Analytical Series.)

Nec tibi quid liceat sed quid fecisse decebit
Occurrat mentemque domat respectus honesti. CLAUD.

VOL. I.]

MARCH 1, 1821.

[No. 4.

I.

A Treatise on Verminous Diseases, preceded by the Natural History of Intestinal Worms and their Origin in the Human Body. By VALERIAN LEWIS BRERA, Professor of Clinical Medicine in the University of Pavia. Translated from the French, with additions, by J. G. COFFIN, M. D. of Boston, United States. One volume, octavo, pp. 363, with five plates.

It was, and perhaps is still, the opinion of some philosophers, that this earth—this “huge globe we tread on,” is but an enormous animal, and man, with all living creatures, but parasites that feed on their common parent. However this may be, it is at least certain, as Dr. Gregory has elegantly expressed it, that—“*ipse animalium dominus hujusmodi animantibus prædæ est et domicilio, quæ vel extrinsecus invadunt, vel intus habitant, et viscera adhuc vivi rodunt, sæpe cum insigni malo, et vitæ discrimine, nec raro ipsius jactura.*” It is somewhat remarkable, that in these days, when every the most trivial disease has one or more monographers, the important subject of worms should have led to no *ex professo* treatise (as far as we know) in our own language. Dr. Coffin has ably supplied this defect, by giving to his countrymen a translation of Professor Brera’s excellent work; and all we can do, for such of our brethren here as cannot import either the original or translation, is to lay before them as comprehensive an analysis of Dr. Coffin’s translation as our limits will permit, and as concentrated a record as literary labour can accomplish.

The able Italian Professor makes but one class of human intestinal worms, which he divides into five species, viz. the

Tænia, *Vermis Vesicularis*, *Tricocephalus*, *Ascaris Vermicularis*, and the *Lumbricoides*.

1. *Tænia*. This is a very long worm, apparently formed by a chain of flat articulations, united together by a border varying in breadth and thickness. The peculiarities of the joints, and of the perforated papillæ on the borders of some *tæniæ*, are owing, Dr. B. thinks, to difference of age, and abundance or deficiency of food. In mammiferous animals the length of the *tænia* is generally from nine to twelve feet ; but in man, from twenty-five to thirty yards. Some have been voided nearly 200 yards in length !

The head is sometimes so small that it cannot be distinguished without a microscope. It resembles a small tubercle which rises on the anterior extremity of the body, called neck. It is furnished with four apertures, which are eminences in some, depressions in other, worms. From each of these apertures proceeds a canal for nourishment, extending to the various articulations. On the heads of some *tæniæ* are recognized by the microscope small hooks, arranged in the form of a double crown ; in others, there is no such apparatus, but a kind of mouth. The joints of the *tænia* diminish in size as they recede from the middle to either extremity of the animal, the tail terminating in a piece quite truncated, and raised on its sides in form of two hooks rounded at their summit. We have no exact description of the interior organs of the worm. We only know that it is oviparous, because in every joint there is an ovary containing a prodigious quantity of eggs of different sizes. These ovaries expel their eggs through the perforated papillæ of the sides ;—it is therefore reasonable to suppose that the animals are hermaphrodites. The *tænia* is very tenacious of life. They have been known to live twelve hours in boiling veal broth, and come out as brisk and active as they went in. The *tænia* generally occupies the small intestines ; occasionally it is found in the stomach. The head is usually towards the upper, and the tail towards the lower, portion of the gut. It is said that the head is firmly fixed in the mucous membrane, whence it is with difficulty dislodged. No one can be freed from the *tænia* till the head is evacuated.

Professor Brera divides the *tænia* into two varieties or species ; viz. the armed and the unarmed *tænia*. The first, the *tænia cucurbitina*, or solitary worm, is that most usually discharged from our patients, and is altogether peculiar to man. With the naked eye we see its head armed with two pointed and protuberant appendages, by analogy called crotchets or fangs, which constitute the specific character of this species.

"If the anterior part of the head of this *tænia* is examined with the microscope, stretching it a little, the fangs, which are seen by the naked eye, are extended into a small crown, perfectly circular and stellated, in the centre of which is the tube." 35.

Werner has demonstrated that the organs constituting the two sexes exist in each ring, and thus proved its hermaphroditism.

The unarmed human *tænia* has been termed the *tænia lata*. It is flat like a riband, of a white colour, and usually of a coarse, dense, and membranous structure. In general the joints of the neck are very thin and delicate, being almost imperceptible. Those that follow approximate the figure of a square, gradually increasing in width, thus continuing to the tail; which resembles a truncated piece. The longest human *tænia lata* which Pallas ever saw, was from eighteen to twenty feet. The head is very minute, and like the other species, is furnished with four lateral papillæ, and a central papilla and tube. This central papilla has not the crown of fangs which encircles the tube of the armed *tænia*. This worm is very rare.

II. *Vermis Vesicularis*. Joseph Ricci of Pavia, about 55 years of age, had been three months subject to intermittent fever, and violent mental affections. On the 26th November, 1797, he was suddenly seized with severe pain in the upper part of the head. He cried out for help, and instantly fell down in a fit of apoplexy, which terminated fatally the following day.

"On examining the body, and finding nothing remarkable in the external substance of the brain, we attempted to open the two lateral ventricles, and found them filled with a bloody serum. Here an unexpected phenomenon presented itself; two large clusters of hydatids extended along the branches of the plexus choroides, to which they were intimately attached, so closely that to separate them I was obliged to tear the substance of the plexus. Each cluster of hydatids was about two inches in length, large and extended at its inferior extremity, which floated at the bottom of the ventricles; the summit terminated by a long chord, folded in various directions, and was strongly attached to the partition which separates anteriorly the two ventricles.

"This double collection of hydatids so regularly disposed, being removed from the brain and attentively examined, we saw that each little bladder contained a real worm, of a structure quite singular." *Brera*, p. 41.

These worms had heads similar to those of the *tænia*, joined to a vesicle full of water, and very curiously organized. Each vesicle seemed to be formed of three different membranes---

the external thin, transparent, glistening—in the middle coat was seen an arrangement of slender circular fibres, which extended over another villous membrane that lined the inner surface of the vesicle. The vesicles contained nothing but water, without any appearance of an internal organ for the natural functions. This worm has been found in the brain, and in various parts of the human body.

III. *Tricocephalus*. This is exceedingly rare, and need not detain us long. It is in the form of a spiral line, about half a line in diameter, the external surface presenting an assemblage of small transverse rings. Its length is from one to two inches.

IV. "The *Ascaris Vermicularis*, which has received divers names by authors, is a round, filiform worm, fine and slender at both ends, from four or five lines to an inch in length. The vivacity with which it moves, skips, and bounds, is singular. If touched with a finger, or brought near the flame of a candle, its body contracts some lines in a surprising manner. It is perhaps to this contractility that we are to attribute those enormous irritations of the intestines, and particularly of the anus, which torment the sick, especially children, who are most subject to them.

"The surface of this worm is full of wrinkles, which seem to be formed by a multitude of rings. Its anterior extremity is obtuse. its posterior end, or tail, is shiny and slender. 49.

The domicile of this worm is generally the cavernous cells of the colon and rectum. It is never found alone, but in conglobate masses of other worms of the same genus. The mucus of the intestines and vagina is that for which this worm has the greatest predilection.

V. The *Lumbricoides* is perfectly round, about the size of a writing quill, and commonly from six to ten fingers' breadth in length. Its colour is white, the whole surface of the body wrinkled and annular, tapering towards both extremities. In the head, examined with the naked eye, we see three beautiful hemispherical eminences which insensibly terminate in a very sharp point, in the centre of which is an aperture.

"In the living worm, on the contrary, we see that these three hemispherical protuberances are pyramidal, with a convex base truncated exteriorly with a very sharp piercing point, in such fashion as to be compared to the divisions or claws of common pincers. With these protuberances the lumbricoides attaches itself to the membrane of the intestines, and even penetrates it, and when sucking up the mucous secretions, it moves these emi-

nences alternately like three jaws ; thus the worm opens and shuts its triangular mouth, furnished with a tube which it can put out or draw in. A mechanism so well understood proves that these protuberances are tissues or textures of muscular fibres." 56.

Children are much disposed to this worm, and adults are not always free from it. They prevail most in persons poorly nourished, and full of viscous humours. They are generally found collected together in great numbers.

VERMINOUS DISEASES.

We have passed over our author's third lecture on the origin of worms, as we are *defenders of the faith*, "*omnia ex ovis*," in opposition to the advocates of equivocal generation.

The morbid symptoms attending worms in the intestines will be proportionate to the number and size of these animals ; to the sensibility of the parts they occupy, and the general morbid diathesis, whether as cause or effect. Children are most liable to the lumbricoides and ascarides—adults to tænia and vesicular worms. The symptoms of worms are undoubtedly often ambiguous ; yet there are certain leading phenomena which may at least admonish the practitioner of the probability of the existence of these animals.

" In persons attacked by worms, the colour of the countenance is changed ; it is sometimes red, then pale, or leaden-coloured ; a half circle of azure appears under the eyes, they lose their vivacity, and are fixed and motionless with regard to surrounding objects ; they are sad and dejected ; the lower eyelids swell, and the pupils are evidently dilated. At other times the eyelids are yellowish, and the same tint extends over the white of the eye. There are also insupportable itchings in the nostrils, with occasional hæmorrhage from the same parts ; headach is frequent, especially after taking food ; this is sometimes so violent as to produce delirium and phrenitis.

" The mouth is full of saliva, and exhales a fetid and verminous odour ; there is grinding of the teeth ; uneasy and agitated sleep, and great thirst. Sometimes somnambulism renders the patient timid. Fainting, vertigo, and tingling of the ears, augment the morbid state of the sufferer. The cough is dry and convulsive, sometimes stertorous and even suffocating, respiration is difficult, and sometimes attended with hiccough ; speech is interrupted, and in some instances entirely suppressed. The mouth is frothy, and there is palpitation of the heart ; the pulse is hard, frequent, rapid, and intermittent.

" The belly is tumid and troubled with borborygmi ; there are eructations, nausea, reaching to vomit, and vomiting. At one time there is no appetite, at another it is so great that the patient is compelled to take more food than ordinary. The belly swells and is the seat of severe pains : there is a sense of pricking and tearing

which is not fixed, but wanders over the whole abdominal cavity ; these sufferings are aggravated when the stomach is empty, and immediately cease on taking food. The bowels are sometimes relaxed, sometimes costive.

"The urine is crude and turbid ; the excrements fetid ; cardialgia afflicts the patient and sometimes destroys him ; the body is emaciated, though the patient eats much ; and violent itching of the anus sometimes occasions fainting.

"At other times tenesmus aggravates the pains of these parts. Languor, anxiety, listlessness, and extravagance in conduct, dis-course, and the intellectual functions, are observed in persons harassed with worms." 143.

We are not to suppose that the union of all these symptoms is requisite to enable us to judge of the presence of worms ; the principal of them are sufficient, especially dilatation of the pupil, abundance of saliva in the mouth, irregularity of appetite, emaciation, a pricking sensation of the stomach, tumefaction of the abdomen, anxiety, loathing of food. Professor Brera has seen pains of the joints, resembling arthritic rheumatism, resulting from worms. In fact, the sympathetic affections produced by the irritation of worms in the primæ viæ, are innumerable, and exceedingly anomalous. Weikard relates the case of a woman who was long harassed with headach, spasmodic affection of the eyes, vertigo, sub-apoplectic attacks, and occasionally temporary blindness. One day, feeling something in her nose, she extracted, with a hook, a living lumbricoides, and then three more. Some anthelmintic remedies now prescribed, brought away seven worms *per anum*, when the woman was perfectly cured of her distressing complaints.

In another instance, a man had complained for three years of a fixed obtuse pain in the right hypochondriac region. He was afterward attacked with a slow fever, and died much emaciated.

"On opening the body, the right lobe of the liver was found hard and large ; introducing the scalpel, a great quantity of yellowish serum passed out, with several hundred hydatids of different bigness. There was every reason to believe they were social vesicular worms." 145.

Worms have been known to excite apoplexy in the brain, and nephritis, when situated in the bladder. *Producunt aliquando erectionem molestam penis.*

Symptoms of Tania. Pain in the belly, with a turning motion and weight in the side—occasional prickings or bitings in the region of the stomach—swelling of the abdomen at intervals, with sense of coldness there—appetite enormous.

while emaciation continues, with sense of increasing weakness—complexion livid—pupils unusually dilated—eyes suffused with tears—vertigo with nausea—vacillation of the legs, and sometimes convulsive tremblings of the whole body—occasional evacuation, *per anum*, of small substances resembling the seeds of the lemon or gourd, which are portions of the marginal papillæ of the worms.

As the head of the armed *tænia* is furnished with pointed fangs, it sometimes attaches itself with such force to the mucous membrane of the intestines, as to produce the most severe, and even deadly symptoms, since the membrane is mangled, and inflammation, or even gangrene, may be the consequence. “A singular symptom of this *tænia* is a frequent sense of tension or tightness in the nose.”

Tricocephalus. These worms, although not possessing a biting organ, may yet irritate the intestines by their presence; while, collected in great numbers, they deprive the system of its requisite nourishment, and thus diminish the strength.

Ascaris Vermicularis. These generally reside in the large intestines, vagina, and other mucous parts. They excite in the large intestines, particularly in the rectum, a dull feeling of irritation, or a tedious and unsupportable itching, or sometimes very acute and cutting pains.

“They are united into conglobate masses with other worms of the same family; the inner surface of the intestines is entirely altered by the irritation produced by thousands of these worms, and the want of mucus, which their eating this fluid occasions, renders these parts more sensible and irritable.” 152.

Infants and enfeebled persons having more mucous substances in their bowels, and being also more irritable than adults and robust constitutions, these worms prevail more in the former, than in the latter, and produce in these individuals, more serious inconvenience.

“Those portions of the intestinal canal which are supplied with nerves from the branches of the intercostal nerve being irritated by worms, the effects which hence result, and which have often been observed, are convulsive cough, grinding of the teeth, itching of the nose, and various other verminous affections, from sympathy.

Lumbricoides. These being possessed of a cutting sharp point, they often cause pungent and rending pains, especially about the umbilical region. Colic and borborygmi are symptoms peculiar to this kind of worm, which sometimes makes its way through the walls of the intestines. It is fortunate for the human machine that this animal possesses great sensibility.

“ Air, and cold water, throw them into a state of asphyxia, and the peristaltic motion of the intestines when quickened, or the use of a drastic purge, is often sufficient to expel them from the body. For this reason, when these worms have once descended into the large intestines, they are easily evacuated.” 154.

SYMPATHETIC AFFECTIONS FROM WORMS.

The doctrine of sympathy between the digestive organs and almost all other parts of the body, was known to Hippocrates, who observes—“in corpore humano conflexus unus, conspiratio, una et omnia consentientia.” *De Ali-mentis*. In all anomalous and rare diseases therefore, the intelligent physician will inquire whether his patient has or has had, any symptoms of worms, since the irritation produced by these animals in the stomach or intestines may derange the whole animal economy, and prove the cause of the most violent morbid affections, even in parts of the body most remote from the abdomen, and particularly the skin. Hence arise, in those troubled with worms, intermissions of the pulse, palpitations of the heart, syncope, vertigo, loss of speech, blindness, buzzing in the ears, mental dejection, restless sleep, hiccup, convulsions, epilepsy, and many other diseases. Here our author gives it as his opinion, that what have been denominated “worm fevers” were really low fevers, “during which worms multiply and grow in those parts of the body that are most enfeebled.”

Treatment. Our able author observes that the great or fundamental principle in the treatment of worms is to prevent their generation—that is, to strengthen the system, so that they may not only be dislodged but rendered incapable of reproduction.

“In the treatment of verminous complaints in general, such remedies as strengthen the body, at the same time that they diminish the morbid secretion of mucus, and resist the decay and consumption of all the parts, give action to the organs destined to the natural functions, annoy the worms, destroy them, and excite throughout the system that energy which is so necessary to expel them, and to prevent their further increase; the remedies that produce all these effects, accomplish the necessary indications.” 189.

Professor Brera properly remarks that it is of little use to forcibly expel worms by drastic purgatives, and leave the predisposition to their subsequent increase unsubdued. He is very sceptical respecting the *specific anthelmintic power* of medicines. He is more inclined to account for their efficacy on general and well-known principles. Drastic purgatives, though they may be proper in robust constitutions.

generally occasion serious mischief when given to enfeebled patients. "In these cases we should effect the desired end, by employing remedies which excite and strengthen the animal frame, without altering the natural secretions of the fluids." Here our author enters upon a *catalogue raisonnée* of the most approved anthelmintics generally speaking, after which he enumerates those medicines which experience has proved to be powerful in expelling particular species of worms.

We shall endeavour to follow our author, passing entirely over some of the remedies, and abridging the observations in all cases.

VEGETABLE VERMIFUGES.

1. *Allium Sativum*, Garlic, has been proved by Rosenstein and Tissot to be capable of expelling worms, especially the tænia.

2. *Artemisia Santonica*, or worm seed, is well known to have considerable power over the lumbricoides particularly. The dose is from two grains to a drachm.

3. *Jalap*, probably from its disagreeable smell and nauseous taste, is a useful auxiliary, at least, to other athelmintics.

4. *Assafætida* has been often usefully employed in several diseases resulting from worms, particularly in the spasmodic class. It is sometimes combined with other medicines, as myrrh, the black oxide of iron, calomel, &c. *Assafætida* enemata are useful in the ascarides.

5. *Oil*, as closing all the speracula of worms is very inimical to these animals. The oil of walnuts has been particularly extolled.

6. *Camphor*. Pringle long ago demonstrated the anthelmintic powers of camphor. The celebrated MOSCHATI generally prefers it to other vermifuges. Half a drachm is dissolved in a pint of water, to which a drachm of gum arabic is added, and this mixture is given in spoonfuls. Or injections of stronger solutions than the above are thrown up.

"The employment of camphor is also attended with this precious advantage, that it counteracts the predisposition to the further development of verminous seeds.

"I have always used it with the greatest success; and I cannot too strongly recommend its use to physicians in worm complaints, whether given in the mode already mentioned, or some other, or combined with other remedies." 199.

7. *Tunacetum Vulgare*, the common tansy, has been long celebrated; but needs only to be enumerated here on the list of anthelmintics.

8. "Aloes, rhubarb, the *gratiola officinalis*, gamboge, chamomile, and particularly sulphureted scammony, (*diagrede sulphuré*.) and other similar articles, are also remedies commonly used for the expulsion of worms. I have not spoken of these substances singly, because these drastics being usually combined with vermifuge remedies, vegetable or mineral, cannot in strict reasoning be directly classed with those medicines, which we use to expel worms from the body, and to prevent the development of verminous seeds." 203.

MINERAL VERMIFUGES.

9. *Murias Ammonia*, combined with rhubarb or jalap, is considered by Block as a very efficacious vermifuge.

10. *Iron*, in consequence perhaps of its tonic powers, is a well-ascertained anthelmintic, tending both to destroy worms, and prevent their subsequent generation. The sulphate of iron is considered to be the best preparation, as possessing the greatest astringent force, and being powerful in moderating excessive secretion of mucus in the bowels. To children Professor Brera gives it in doses of from two to ten grains; and to adults in doses of half a drachm to a drachm. These are large doses. Our author thinks that its virtues are much enhanced by conjunction with cinchona, valerian, jalap, assafœtida, &c.

11. *Mercury*. Quicksilver can have no specific effect against worms, since those who work in the mercury mines of Almada, in Spain, are peculiarly subject to worms, though these people absorb such enormous quantities of that mineral, that small globules of mercury are evacuated with the stools. The same thing happens in the mines of Lydria, and in the laboratories of Chemnitz, in Hungary. Besides this, Rosenstein has administered mercury in several cases, even to salivation, without being able to expel a single worm.

"Mercury, given in the state of oxide, acts on the solids as a powerful stimulant, since by its use, the pulse acquires great force, and the secretions and excretions are augmented. In this way several of the oxides of mercury have been very efficient in expelling worms, and in curing verminous affections. Among these the submuriate of mercury is to be preferred." 213.

Ptyalism should never be produced in these cases.

12. *Petroleum* is famous at Montpellier against worms. Rosenstein, many years ago, relates the case of a man who was delivered of a *tænia* by a dose of petroleum and oil of turpentine.

13. *Stannum* was considered vermifuge ever since the days of Paracelsus. Of zinc, sulphur, and some other minor anthelmintics, we shall not here take notice.

TREATMENT OF TÆNIA.

Our author justly observes that the same treatment which succeeds in a robust, will often fail in a weak, or cachectic constitution. Drastic purgatives may expel the tænia from the one, while tonics and stimulants may be the best remedies in the other.

1. *Rosenstein* expelled tænia by first giving a purgative, and after its operation had commenced, causing the patient to drink repeated draughts of *cold water*, which by depriving the worm of the power of moving the neck and fixing the head into the folds of the intestines, rendered it liable to be detruded by the peristaltic action of the intestines. *Darilias*, *Lindhult*, and some others followed this plan.

2. "*Chabert*. The essential oil of turpentine, combined with petroleum, has already been noticed, as well suited to expel tæniæ. The remedy of *Chabert* consists in the distilled oil of turpentine with the liquid carbonate of ammonia; this mixture he assures us is a very powerful and infallible means of expelling the tænia from domestic animals. Repeated observations prove, that though this remedy acts with activity and energy against tæniæ, it produces not the least disorder in the system. It is also to be desired that it should be adopted by physicians to expel tæniæ from the human body, since we have seen that the essential oil of turpentine, muriate of ammonia, and carbonate of liquid ammonia, are also remedies, which have been advantageously employed both against tæniæ and lumbricoides." 225.

Chabert published on this subject in the year 1781, and our author's lectures were delivered in the years 1798 and 1799, consequently all claim to priority or originality is taken away from the practitioners who first introduced oil of turpentine as a remedy for tape-worm in this country. The earliest mention which we have seen made of the medicine is by *Dr. Bateman* in the *Edinburgh Journal* for April, 1810, and is as follows:—

"I may here mention, that in consequence of a communication from *Dr. Southey*, of *Durham*, to my colleague, *Dr. Laird*, in which it was stated that the oil of turpentine had been discovered by *Dr. Fenwick* to have been used, with considerable success, in the expulsion of *tape-worm*, by a mechanic of that city, this substance has been administered in doses of from half an ounce to two ounces, by several physicians of public charities in *London*, and it has appeared to be an active antidote to that troublesome animal, in a great majority of instances. In a considerable number of cases its exhibition has been followed, in the course of a few hours, by the discharge of a dead tænia, of many yards in length. The oil of turpentine may be swallowed with scarcely more inconvenience than so much gin, and its effects are nearly the same when taken in

large doses, viz. some degree of vertigo, or an approach to intoxication. It generally acts as a speedy purgative, and produces no unpleasant effects on the bladder: but, in a very few instances, it has occasioned a distressing sense of heat in the stomach, with considerable sickness; and, in one or two cases, has produced stranguery. Even in these few cases, in which it has failed to expel the tænia, it has commonly afforded great relief to the painful feelings which were believed to originate in the presence of the worm."* 253.

In the 7th volume of the same Journal, Dr. Bateman again mentions two cases of tape-worm, in both of which turpentine, to the amount of ʒiiss, was given—"and in both it was followed by a discharge of a very considerable length of the worm."

In the 9th volume, Dr. Bateman states the case of a patient affected with tape-worm, where the oil of turpentine afforded certain, but temporary relief from this troublesome parasite. The patient took the medicine five or six successive times, and invariably with an expulsion of a considerable length of worm, to the extent, upon the whole, of many yards. But always in two or three months, his pains returned, and he was forced to repair to the dispensary for a repetition of his dose.

After this the periodical journals exhibit numerous cases of the successful exhibition of oil of turpentine for tænia. Mr. Hartle, of Antigua, has published some interesting cases, and made some judicious observations on the subject. He says, "I am fully persuaded, that a large dose is less likely to affect the urinary organs, than a small one; a large dose acts immediately as a cathartic, and purges itself off before the absorbents have time to play on it." Mr. Hartle thinks that the effects of tænia are often overlooked in the West Indies, or confounded with chronic dysentery.

"The patients are generally, at least those that I have seen, meagre and emaciated, with a voracious canine appetite, never satisfied with any quantity of food, and wearing all the appearance of having been starved. Gripping pains of the belly, particularly in the mornings before breakfast, with one or two watery stools, a grumbling noise of wind in the intestines, succeeded by pain, pains in the stomach, and occasionally passing pieces of the worm. I would recommend to every medical gentleman to desire his patients to observe particularly their stools, by which means he will often find out the true disease, and be relieved from that anxiety which must naturally

* In the second volume of the Medico-Chirurgical Transactions, for the year 1811, Dr. Fenwick's paper is published. It was read at the society on the 2d of January, 1810, and the allusion to it by Dr. Bateman is in April, 1810. Dr. B. of course, heard the paper read in January.

be excited in the mind of every medical man, when he finds that his remedies have failed to give relief." *Ed. Journal*, vol. 14, p. 482.

Dr. Coffin, the American translator of Brera's work, informs us, that oil of terebinth. is now generally used in the United States, and he thinks "it will be found equally effectual in killing all the species of this worm and the lumbricoides." The greatest inconvenience Dr. Coffin experienced from the exhibition of this medicine is the thirst which follows, and the prohibition of taking fluids for many hours, which is generally enjoined. To obviate this, he recommends the stomach and bowels to be well evacuated before the spirit of turpentine is given; if the latter be in a sufficiently large dose, it will commonly pass through the bowels in an hour and a half, or even less. As soon as any turpentine begins to pass *per anum*, whether the worms appear or not, the patient may be allowed to drink freely of any bland fluid.

Upon the whole, there can be little doubt but that oil of turpentine is the best remedy hitherto discovered for the expulsion of *tænia*. But as different constitutions will occasionally require different means, it is proper in an eclectic article of this kind to enumerate the principal methods which have been employed by different practitioners.

3. *Method of Nouffer.* Towards the middle of the last century, Madame Nouffer's remedy against *tænia* excited considerable attention. The medicine was three drachms of the root of the male fern, in powder, mixed with four or six ounces of the distilled water of male fern, or lime-tree flowers, taken in the morning. The dose of course was graduated for children. Two hours after taking the powder, the patient is to swallow the following bolus:—Take of calomel, and dry resin of Aleppo scammony, of each twelve grains; of gamboge five grains; form into a bolus with hyacinth confection. This, by the way, was a tolerably good vermifuge of itself, and doubtless contributed more towards Mad. Nouffer's success than the fern powder.

4. *Method of Odier.* The remedy of this celebrated physician was no other than castor oil. It both kills the worms and expels them. Adults should take three ounces of the oil, and children a tea-spoonful several times a day. Professor Brera considers that this remedy is chiefly applicable to cases of unarmed *tænia*. "I can, however, say, that it sometimes serves wonderfully well to expel also the armed *tænia*." LELLE advises that the oil be taken at bed-time, and ten grains of gamboge the next morning.

5. *Method of Desault.* This celebrated physician "proposed an ingenious and bold expedient, that of administer-

ing alternately a mercurial friction, and a purgative of calomel in a large dose."

6. *Method of Alston.* This is by tin. But, as Professor Brera properly observes, this method is objectionable on account of the danger of lead or arsenic being mixed with the tin. He himself saw the colica pictonum, and paralysis of the lower extremities, produced by taking the filings of tin.

Method of Mathieu. His method, which begins to prevail, consists in the administration of two electuaries, compounded of the filings of English tin, the powdered root of male fern, semen-contra, scammonia of Aleppo, gamboge, and sulphate of potass.

"The electuaries which M. Mathieu administers to his patients are mild; the first is marked A. the second B.

"*The first Electuary, A.* Take an ounce of very fine English tin filings, six drachms of the root of the polypodium filix mas, half an ounce of semen santonicum, a drachm of the resinous root of jalap, and of sulphate of potass, and of honey sufficient to make an electuary.

"*Second Electuary, B.* Take two scruples of the pulverized resinous root of jalap, and of sulphate of potass, one scruple of scammony from Aleppo, ten grains of gamboge, and of honey sufficient to form an electuary.

"Those who may be inclined to adopt this method to expel tæniæ, must observe the four following rules:—

"1. For some days previous, the patient is to be confined to a suitable diet, that is, he is to eat salted substances,—for example, herrings, light porridges and broths, and leguminous articles.

"2. The treatment is begun by administering to the patient, every two hours, a tea-spoonful of the electuary A. This course to be continued two or three days, till the worm is perceived to be in the intestines, and then,

3. The patient is to take electuary B, and of this he also takes, every two hours, a tea-spoonful, till the worm is expelled.

"The discharge of the worm is facilitated by taking some spoonfuls of fresh oleum ricini, or by some clysters of the same oil.

"4. The age, sex, and temperament of the patient may require a considerable modification of the dose of these remedies; for this reason the treatment ought to be directed and modified by a well-informed physician.

"Finally, it is to be borne in mind that the virtue of the electuary A. depends in great part on the root of the polypodium filix mas; hence this root should be fresh, and its internal hard part only should be reduced to powder. 345-6-7.

The French translators here state that they saw Dr. Bourdier, of Paris, administer the following remedy, with great success in both species of tænia.

"Pour a drachm of sulphuric ether into a glass of the decoction

of male fern, which the patient is to take fasting; four or five minutes after, an injection of this same decoction, with two drachms of ether, is to be thrown up. One hour after, give two ounces of oleum ricini, and one ounce of the syrup of peach blossoms. This treatment is to be continued for three days. The worm is commonly discharged but half organized.

"When the worm is in the stomach, success is certain; when in the intestines, the treatment, after some time, is repeated; then Dr. Bourdier prescribes an enema of decoction of fern and two drachms of sulphuric ether, immediately after the patient has swallowed the etherated potion." 241.

8. *Arsenic*. Dr. Coffin has known Fowler's solution destroy the tænia in several cases. Dr. Fisher, of Massachusetts, also observes, that the tænia may be destroyed by Fowler's solution. For this purpose the patient should take it, two or three times a day, in as large doses as the stomach will bear: and continue the use of it till the worms are destroyed. Hitherto this remedy has not disappointed me in a single instance."

In this country Dr. Girdlestone, of Yarmouth, states in the 15th volume of the Medical and Physical Journal, that he has, for some time, prescribed the solutio mineralis in cases of tape-worm. "This medicine," he says, "with the use of purgatives, brings away larger portions than any purgative medicine without it. And I have found the solutio mineralis a most powerful destroyer of the ascaris lumbricoides."

9. *Pomegranate*. Dr. Pollock, of Bengal, has stated that a number of cases of tænia were cured by decoction of pomegranate. "In some of these the tænia had acquired an enormous length, and in some of them it was received in tepid water, and lived for several hours after it was passed." *Ed. Journal*, vol. x. p. 419.

Treatment of the Ascaris Vermicularis.—"Clysters of *geoffroya*, *surinamensis*, of *assafetida*, of *veratrum sabadilla*, of tepid milk well salted, or of simple water salted, are the best remedies to drive these worms from the large intestines. Enemas of oleum ricini, and plugs of soap smeared with this oil, are very useful. Tenesmus, hæmorrhoids, swelling, tension and inflammation of the anus, symptoms sometimes occasioned by ascarides vermiculares, particularly when there is inflammation of the intestines, ought to be treated with clysters and emollient fomentations, and, in general, agreeably to the indications of peculiar circumstances." 292.

We may add, that injections of lime-water here proved very serviceable in this species of worm. We must endeavour to supply the loss of the natural mucus destined to lubricate the inner surface of the intestines with enemata of gela-

tinous substances. Ascarides, though feeble worms, are with difficulty destroyed. The minute embryos of the female ascaris, though deposited alive, are not visible at the time, and therefore, patients who too suddenly abandon the curative regimen, are again attacked when they think themselves well. The use of injections alone is not generally sufficient to destroy these worms, which sometimes ascend the alimentary tube as far as the small intestines, or even the stomach. Mr. Charles M. Clarke says :—

“ A strong decoction of the semen santonici is the most efficacious of all the injections in use. With this the rectum should be filled ; but the quantity thrown up should never be so great as to produce great distention of its cavity, lest the coats of the bowel being stimulated, it should contract hastily and expel the clyster, which acts with more certainty, if it remains for some time. This operation, repeated for a few successive days, will seldom fail to remove, for a time, the ascarides and the symptoms they produce.

“ Purgatives employed alone are of little service ; but during the use of the clysters they ought to be occasionally exhibited.” 294.

In addition to injections, we have generally ordered small doses of calomel for two or three nights, and then a cathartic of rhubarb and jalap, or scammony, on the third morning. In a majority of cases, this treatment, with clysters of lime-water, oil, or assafetida-solution will succeed. Where these fail, we think the spirits of turpentine should be tried. .

Lumbricoides. Of all the remedies for lumbricoides, Professor Brera thinks there is none equal to camphor.

“ This substance, administered according to rule, expels lumbricoides with facility and promptitude, and at the same time strengthens the intestinal tube and the whole body, as we have already said. This remedy kills these worms in an instant, perhaps because its penetrating and volatile odour acts by restoring, in a surprising manner, the excitement of the first passages, and those parts, which are sympathetically connected with these organs, relieving the convulsions and spasms occasioned by worms, and preventing the cause of them.” 299.

Perhaps, however, the *dolichos pruriens*, or cow-itch, may be ranked among our most powerful vermifuges, destroying not only the *tænia*, but also the *lumbricoides* and *ascarides*. The ripe pods are to be dipped in syrup, which is again scraped off with a knife. When the syrup is rendered as thick as honey by the hairs, it is fit for use. It may be safely taken from a tea to a table-spoonful in the morning fasting. Mr. Chamberlaine, who published on this subject, prefers common treacle to any other vehicle. In Massachusetts,

Dr. Coffin informs us, it is much used, and is more certainly and speedily beneficial, when it is preceded by an emetic or cathartic, or both; and when a purgative, as castor oil, is occasionally interposed. This should be done every second or third day, during the exhibition of this article, if there is the least costiveness.

In respect to hygiene, after worms are expelled, it is only necessary to state, that all those means which strengthen the system generally, and the tone of the digestive organs, in particular, will be the proper preservatives against a regeneration of these disagreeable parasites.

We have now presented the prominent features of our learned author's work, and that of his able and intelligent translator. We have concentrated into a small space, a great mass of useful information, which we hope may prove acceptable to the profession, especially to the junior branches, as a concise reference on the subject of worms and verminous diseases.

II.

An Essay on Syphilis; submitted, by Authority of the President and his Council, to the Examination of the Royal College of Surgeons of Edinburgh, when Candidate for admission into their Corporation. By GEORGE BALLINGALL, M.D. F.R.S.E. F.R.C.S.E. and late Surgeon to His Majesty's Thirty-third Regiment. Octavo, pp. 36. Edinburgh, 1820.

By observation of its title-page, our readers will readily discern the nature and object of this probationary essay. On a former occasion (*Quarterly Series of this Journal*, No. V. p. 26,) we introduced its author to the profession, by an analytical review of his able and useful *Observations on Indian Dysentery, and other intertropical diseases*. Since publishing that work, he has obtained, in 1819, the degree of Doctor in Medicine from the University of Edinburgh, after defending the doctrines of an *Inaugural Dissertation on Sanguineous Apoplexy*. As we deem the sentiments of such a man to be at all times worthy of respect, we assume the merit of being profitably employed, when we endeavour to disseminate his views of an important practical question.

Dr. Ballingall treats his subject under the twofold arrangement of—Preliminary Remarks on the Use of Mercury in Syphilis—and Observations on the Treatment of the primary Symptoms of the Disease.

I. Strengthening his opinions by the authority of Mr. Pearson, Dr. Curry, Mr. B. Bell, Dr. Watt, Mr. Carmichael, Mr. Matthias, and other eminent names, Dr. Ballingall declares himself an adherent to the mercurial treatment of syphilis; but at the same time acknowledges this to be the only mode of treating it, whereof he has had extensive experience.

"Upon referring," says he, p. 7, 8, "to a register of sick in my possession, which was kept at Masulipatam in the East Indies, from the 15th of March, 1810, to the 17th of February, 1811, I find that, out of a detachment of the 2d battalion of the Royals, consisting of about *five hundred* men, *eighty-six* venereal cases were admitted into hospital; that these were, upon an average, *twenty-two days* each under treatment; and, that not more than *seven* secondary cases could possibly have occurred.*

"This is the only period of my experience in the treatment of syphilis, of which any documents in my possession enable me to speak with precision: but, when I recollect that nothing peculiar was observed, during that period, either in the appearance of the disease, in the progress of the cures, or in the number of secondary cases occurring, I cannot but look on the above, with some degree of confidence, as a tolerably exact estimate of the result of all my observations on this point, and the estimate must necessarily be an unfavourable one, from my having included, under the head of secondary cases, all those whose names occur a second time in the register, although, of these, it is probable some were re-admitted with recent infections, instead of secondary symptoms. When I consider again, that, for many years of my life, I was in the habit of seeing at least from *ten* to *twenty* venereal cases daily; that these cases were almost uniformly treated with mercury; that the cures were as speedy and the relapses as few as I have stated them to be at Masulipatam; and that, in the whole course of my observation, I have seen only *one* man die of this disease, I must necessarily look upon mercury as more uniformly successful in the cure of syphilis, than any other remedy in any other disease with which I am acquainted."

II. As the more immediate business of his essay, Dr. Ballingall now proceeds to consider the primary symptoms of syphilis—chancres and buboes.

Assuming the Hunterian characteristic of chancre—"circumscribed hardness of the edge and base"—as liable to vary in degree, and that this hardness may be shaded down until it becomes nearly indistinguishable, Dr. Ballingall, p. 12,

* "The proportion of venereal cases which occurred at Masulipatam, was greatly below what I was accustomed to meet with in India, owing to the vigilance and activity of Mr. Annesley, the garrison-surgeon, who superintended the Lock Hospital."

advises our not confining "ourselves too rigidly to this definition in deciding upon the mode of cure, particularly if we are to exclude from the beneficial operation of mercury all ulcerations of the genitals, which do not possess the Hunterian character of chancre; for my experience," says he, "convinces me that the cure of many of these ulcerations will be expedited by mercury, when a circumscribed hardness of the edge and base does not exist in any remarkable degree."

Dr. Ballingall, p. 13, follows Mr. B. Bell¹ in extending the appellation of chancre to sores in the genitals, which offer a considerable variety in appearance." His treatment, of course, is the mercurial, under such modifications as circumstances may indicate. He advises confinement to the house, in all cases when practicable—to heal the chancrous ulcerations with the least possible delay—to keep them clean by frequent ablution, and dressing with dry lint—to introduce mercury into the system in moderate proportion, by means of the blue pill, by inunction, or by the mineral combined with opium—and, when there is evidence of the system being moderately impregnated, to touch the sores with lunar caustic, to dress them with ung. oxyd. hydrarg. rubr. or preferably with ung. subacet. cupri, or to wash them with lot. hydrarg. submur. nigr. attention being paid, at the same time, to the variations of constitutional symptoms.

Dr. Ballingall's description of the venereal bubo, and his history of its symptoms, its diagnosis, its treatment, are luminous and accordant with the experience of intelligent observers. His treatment is simple, but decisive. "Every part of the antiphlogistic regimen," says he, p. 22, "is to be combined with the use of mercury, and the assiduous employment of every local means," such as topical leechings, sedative and astringent lotions, particularly those of the acetate of lead, to promote the dispersion of the tumour."

When the inflammation is violent in plethoric habits; and, particularly, as frequently happens, when "there is a fiery erysipelatous appearance on the surface of the tumour, general blood-letting," in Dr. B.'s estimation, p. 22, "is the only means which can effectually avert suppuration." When he meets with "tumours of a mixed nature, evidently originating from a venereal infection, while, in their progress they seem more akin to the scrofulous bubo, remaining for days, and sometimes for weeks quite stationary, without showing a decided tendency either to resolution or suppuration," he forthwith directs blisters to be applied to their surfaces. In a majority of such cases, he declares, p. 24. his confidence in the blisters being able to "procure discussion of the swellings, and in all of them, certainly to expedite their

termination in resolution or suppuration.”—“This is a practice,” he goes on to say, p. 24, “by no means so general as it ought to be, and to some I know that it is altogether new—It is one which I have been in the habit of using very extensively ever since I entered the army, now nearly fifteen years ago, and it may be supposed I am not the less inclined to persevere in it, from finding it recently recommended by a gentleman of Mr. Carmichael’s talents and experience.” ‘The buboes in this form of venereal disease,’ says Mr. C. p. 21,* ‘are often remarkably hard and indolent; evincing neither a tendency to disperse nor to suppurate. In such cases, the greatest advantage may be derived from the repeated application of blisters to the indurated bubo, which soon either causes the dispersion or the suppuration of the tumour.’

Failing to avert suppuration, Dr. Ballingall renounces the discutient treatment, and endeavours to promote that process by an assiduous use of fomentations and warm emollient cataplasms frequently renewed. Instead of opening a bubo by the caustic, he prefers evacuating its contents by a free incision of the teguments with a common or abscess lancet, and “nothing,” says he, p. 25, “should induce us to be too sparing in the extent of the opening, which frequently leads to the formation of sinuses requiring renewed operations, and unnecessarily protracting the sufferings of the patient.” He advises, p. 27, the passing of a small seton through the base of extensive buboes when they advance to suppuration, while their integuments remain firm and little discoloured on the surface. In one case of open bubo, with a sinus, he accomplished a cure contrary to his expectations, by injecting a solution of the sulphate of iron, by which “the sinus,” p. 27, “was completely and firmly healed in a few days.”

Dr. Ballingall concludes his observations on the treatment of venereal chancres and buboes, with two extracts from his friend Dr. Hennen’s valuable work on Military Surgery. “The Doctor,” says he, p. 29, “brings forward some very striking instances of the sufficiency and permanency of cures effected without mercury, while at the same time, he is far from denying the utility of this medicine in some cases of syphilis, as will be seen by the extract at page 285 of our second Number of this Series. Fortunately for the good of mankind and the honour of our profession, this question of the possibility of eradicating syphilis, with as much or more

* Carmichael’s Observations on the Symptoms and Specific Distinctions of Venereal Diseases, 8vo. London, 1818.

convenience and perfectness, by a non-mercurial as by the mercurial treatment, has hitherto been discussed with the moderation, the generous zeal, and the dignity, by which the investigations of science and philosophy ought at all times to be distinguished. Many facts drawn from the repositories of actual observation have, in consequence, been promulgated by the advocates of either practice, in support of the doctrines which their reasonings are destined to maintain. Nevertheless, experience may, in the end perhaps, induce us to prefer a modification of the rival precepts—sometimes the mercurial, sometimes the non-mercurial, generally a treatment comprising the principles of both—a modification, such as circumstances may require and prudence discriminate. By such mixed treatment, we mean an exhibition of mercury, as a balancer of the vital functions, as a reducer of febrile and inflammatory action, in co-operation with the non-mercurial treatment strictly so designed.

Among the leaders in these interesting disquisitions may be ranged, Mr. Allan* of Edinburgh, and Mr. S. Cooper† of London; the former a naval, the latter a military, surgeon, each of whom has favoured the profession with his sentiments on this question, so intricate in its nature, and so important in its results. Mr. Allan, p. 194—196, 205—207, 218, 219, gives a decided preference to the mode of treating syphilis with mercury; while Mr. Cooper's opinions, Vol. I. p. 354—56, favour very strongly, but temperately, the non-mercurial practice. Having, however, devoted an ample space in our second No. to the exposition of this grave subject, we shall not, at present, resume it, but complete this sketch with Dr. Ballingall's manly and dispassionate avowal.

"I am still far," he declares, p. 5, "from being disposed to undervalue the labours of those eminent men who have recently written in favour of the non-mercurial treatment of syphilis: I fully appreciate the benefits accruing to scrofulous and phthisical patients, from the proof which has been given of the possibility of curing the disease without mercury; and I am most ready to admit, that the recent discussions upon this subject, have been of infinite advantage, both to the profession and the public, by restricting the use of so

* *A System of Pathological and Operative Surgery, founded on Anatomy; illustrated by Drawings of Diseased Structure, and Plans of Operations*; by Robert Allan, F. R. C. S. E. & L. 8vo. Edinburgh, 1819. Vol. I. pp. 496.

† *The First Lines of the Practice of Surgery*; designed as an Introduction for Students, and a concise Book of Reference for Practitioners; by Samuel Cooper, late Surgeon to the Forces, &c. Two Vols. 8vo. London, 1820.

powerful a remedy, which, like all others, in the same proportion that it is useful under judicious administration, is capable of doing mischief by its unnecessary, ill-timed, or injudicious employment."

This little tract, upon the whole, is very creditable to Dr. Ballingall's good sense and accurate observation; nor does it detract from the reputation which this gentleman has well and honourably earned by his very valuable practical work on Indian diseases.

III.

A Treatise on the Plague, designed to prove it contagious, from Facts, collected during the Author's Residence in Malta, when visited by that Malady in 1813. With Observations on its Prevention, Character, and Treatment; to which is annexed an Appendix, containing Minutes of the Author's Evidence, given before the Contagion Committee of the House of Commons, accompanied by their Report. By Sir ARTHUR BROOKE FAULKNER, M. D. Fellow of the Royal College of Physicians; late Physician to His Majesty's Forces, and Physician in Ordinary to His Royal Highness the Duke of Sussex. One vol. octavo, pp. 312, with two plans. London, 1820.

"Mittant pestiferos Cæstus et tetra venena." *Val. C.*

"PESTIS, et ira Deum Stygiis sese extulit undis." *Virg.*

IT hath pleased the ALMIGHTY (for we are yet superstitious enough to believe in the existence of a DEITY) to permit good and evil to be promiscuously scattered through every people on the earth, and through every class of society. It is equally wonderful and fortunate that every nation or tribe becomes firmly attached to its natal soil, however barren, or however baneful that soil may be! No consideration can draw the Hollander from his noxious fens—nor the Swiss from his naked mountains. The Negro basks with delight in the scorching ray of a tropical sun—the Russian rolls himself in the chilling snow. The Byzantine fatalist calmly inhales the pestilent breath of contagion—the Briton sees his family and friends cut off in succession by the gloomy climate. Yet all cling to the land that gave them birth:

"And each proclaims that happiest clime his own."

This is a universal propensity of Nature; for animals possess it in the strongest degree—next to them the savage—

then the half-lettered peasant—and last of all the cosmopolitan philosopher. How is this to be accounted for? There is implanted a sense of gratitude (whatever may be said to the contrary) in the breast of all animated beings. The earth that feeds them, the house that shelters them from their infancy, become at length endeared to them, and preferred to better, but less familiar abodes.

These, among other reflections, have been excited by the perusal of an interesting topographical sketch of the island of Malta, with which Sir Brooke Faulkner opens the work before us, and of which we shall endeavour to convey some idea to our readers.

Were it not for the rude and unsightly interference of quarries and stone ditches, Malta would present a pleasing aspect; as there is hardly a foot of the rock, with a covering of mould, that is not laid under contribution for the production of corn, cotton, fruits, or roots, every season yielding a more abundant crop, in proportion, than Sicily itself, the once famed granary of Rome. The face of the country, however, when viewed in perspective, resembles an extensive stone-cutter's yard—a great part of the island, especially to the westward, being a barren waste, “presenting little beside the bare bones of Nature, which, in all probability, will never be clothed.” Sir Brooke has gone into these details respecting the surface of the soil, in order that the advocates for the generation of plague, by noxious exhalation from the ground, may see how far they are deprived of the benefit of such an hypothesis, when applied to such a country as Malta, and to such a city as Valetta, which we shall presently describe. There are, however, three spots on the habitable part of the rock, which may be termed marshy or moist; and our author endeavours, in another part of the work, to prove, that these places exerted no kind of influence in producing the plague, being not only remote from the towns which were first assailed, but having indeed very few cases of the disease in their vicinity. There are neither rivers, plantations, nor morasses, in any part of the island.

Although the climate of Malta is hot, it has many other advantages, there being rarely any fogs or vapours—and excepting in the first three months of the year, the sky is one continued azure, with seldom a cloud to intercept the rays of the sun. In summer the thermometer ranges from 75° to 85°, in the shade. Owing, however, to a deception of the sense, the oppressive languor caused by the Sciroc wind, imparts a sensation of the climate being much warmer than the thermometer indicates. Sudden atmospherical transitions, from heat to cold, are felt in a remarkable degree; when the

wind shifts from a southern to a northern point—a circumstance common to most parts of the Mediterranean near the African coast. And, *e contra*, when the wind suddenly changes from North to Southeast, the rise in the temperature is frequently twenty degrees.

These vicissitudes of temperature rarely produce any serious detriment to the Maltese constitution. “The most delicate habits will emerge from three or four days of Sciroc, with as much impunity as if the temperature had been perfectly uniform and moderate.” The change from Sciroc imparts, of course, a feeling of elasticity and exhilaration, resembling that which follows the cold bath in sultry weather. The effects of the Sciroc are evidently something more than thermometrical; but what the peculiar quality of this wind is, we at present know not.

The seasons of one year do not differ materially from those of another—there is not, indeed, much variable weather, excepting in early spring, when rain falls in considerable quantities, and tempestuous gales upset the small craft in the harbours. These are the Euroclydons which proved so disastrous to St. Paul. Snow and ice are seldom seen, and, when seen, are very transient. In hot summer weather the night is the most oppressive part of the twenty-four hours, being nearly as hot as the day. On this account the dews are necessarily inconsiderable.

“Thunder and lightning are not unfrequent occurrences; nor can any thing be imagined more awfully magnificent than the sky, dressed in all its gloomy terrors, whilst the vivid flashes dart across the horizon in rapid succession. The thunder-peal is truly terrific, and has often brought to my recollection the following passage, in which its effects are described with such majesty:—

‘Quo bruta tellus, et vaga flumina
 ‘Quo Styx, et invisi horrida Tænari
 ‘Sedes, Atlanteusque finis
 ‘Concutitur——’

On these occasions the rain falls in torrents, but is soon over, and the sky resumes its natural serenity.”

There are about twenty-four small towns, or *casals*, on the island, all of which are built of hewn stone, and are both commodious and healthy. Between these are sprinkled a few country-houses and hamlets.

“The natives are healthy, active, strong, industrious, and sober; and so devoted to their country, as to think no other on the face of the earth can come into comparison with it. Hence they dignify it with the title of ‘Fiore del Mondo.’ Their diet is simple, consisting of vegetables, macaroni, fruit, eggs, oil, cheese, honey, and a little animal food, (for the most part fish,) and they are very temperate in the use of wine and spirits.” 16.

The adjacent island of Gozo, though standing higher, has a leveller surface, gives less trouble to the husbandman, and makes a better return to his labour. Malta is about twenty miles in length by twelve in breadth. Gozo nine by five.

From the above topographical sketch of these islands, our author concludes, that "there is no *prima facie* evidence of their being liable to generate pestiferous miasmata." Of this position we entertain some doubts. We fear there are few spots of the earth so favoured as not to give origin, under peculiar circumstances, to morbidic effluvia. But what these peculiar circumstances are, we cannot yet ascertain. Neither does this event at all affect the object which our able author labours to attain.

The second chapter of Sir Brooke's work being argumentative on the "chief causes which have led to errors respecting contagion," we shall pass it over, as not adapted to analysis, though containing many shrewd and excellent observations. The third chapter adduces "facts, in proof of the contagious nature of the plague." These are arranged under three heads. 1st. The extension of the disease to Valetta from an infected vessel, the San Nicolo. 2d. Its extension to individuals who were infected by communicating with the first case in Valetta—and to the Augustin convent. 3d. Its extension to certain casals, and to the island of Gozo.

The first position, or the introduction of the contagion from the vessel to the shore, our author fails to prove by *direct* evidence. The current report at Malta was, that one Salvatore Borg, a shoemaker, having purchased a piece of linen on board the San Nicholo, introduced the fomites into his own family, whence it radiated afterward to other persons. Dr. Granville has since stated that this was authenticated as a fact, under the authority of Sir Thomas Maitland's despatches, and other official papers.

"It may be satisfactory to the reader to be informed of the following particulars relating to the arrival of the San Nicolo :

Two Turkey merchants shipped on board this vessel, at the Port of Alexandria, a cargo of linen, flax, and leather, with some other articles. Part of the crew having died of the Plague on their voyage to Malta, the vessel applied to the Health Department of the Island on her arrival (the 28th March) for admittance into Port, previously using the precaution to notify her state, by hoisting a yellow flag with a black ball in the centre, this being the signal to indicate the actual existence of Plague on board. Her application being acceded to, she was accordingly received into quarantine in the Marsamuchet Harbour, within about a cable's length of several points of land, and of the city of Valetta. The surviving part of the

crew were taken into the Lazaretto, situated in a small island in the middle of the harbour. The captain of the San Nicolo and his servant sickened in a day or two after their being received into the Lazaretto, and died with indisputable symptoms of the Plague." 46.

In a few days after this occurrence, and after an immunity from plague of 137 years, this dreadful scourge manifested itself in Valetta. The first person attacked was Salvator Borg's daughter, residing near the centre of Strada St. Paulo, one of the principal streets of Valetta. This was on the 16th of April. She was visited on the 19th by a Maltese physician, who found her in a dying state. She died on the same evening. He observed two tumours on her chest, below the mammæ, resembling carbuncles. The mother, then pregnant, was seized on the 1st May, and died on the 3d, with buboes in both groins. On the 4th May, her husband, Salvator Borg, was attacked with fever, having at the same time the glands of the axilla and groin enlarged. He lingered till the 12th, when he expired with unequivocal symptoms of plague. The next victim, in succession, was Maria Agius, a schoolmistress, who was a frequent visiter in Borg's family, and who assisted his wife on her death-bed. This woman died on the 6th May, "with unquestionable marks of the disease." On the 8th May, Grazia Pisani, a girl on terms of the closest intimacy with Agius, was seized with the disease, but recovered. On the above day also, Salvator's father was attacked, and died the next; on the 14th another child of Salvator's was seized with plague, and ultimately died. On the 17th, Arcangelo Delivato, after a residence of eleven days under observation, in consequence of having held communication with Maria Agius, became affected with well-marked symptoms of the disease, and sunk the next day with a carbuncle near the os sacrum. This man was accustomed to visit Agius before and after her attack.

"Here, then, we have traced the propagation of the disease from the first case in Valetta, in *eight distinct and well-authenticated instances*, and all of them in the continuous line of communication with each other. The last six cases are given on the authority of Medical Reports, published under sanction of the Government of Malta." 65.

About this time the contagion, our author informs us, began to diverge in so many directions, in consequence of the unrestrained intercourse of the people, that it would have been extremely difficult, if not impracticable, to trace the line of contamination, which, however, was never earnestly pursued. To this difficulty there was one exception, namely, the Augustin Convent, which, seated in a peculiarly healthful, spacious, and airy part of Valetta, had, from the very begin-

ning, observed the greatest caution in shunning communication with the public.

"It was at length, however, infected, in consequence of one of the servants, who was caterer by occupation, having, in disobedience of public orders, gone into a very contaminated part of the town, called the Manderaggio, and purchased infected clothes. Shortly after his return he made full confession of the circumstance, when one of the brotherhood belonging to this convent, out of compassion, immediately volunteered to attend him, placing himself, at the same time, in strict quarantine with the patient. Both nurse and patient immediately fell victims to the disease, but *no other individual under the same roof was ever assailed.*" 68-9.

Judging from the advantageous situation of the convent, in point of salubrity, "it was perhaps the very last place where ingenuity could discover a pretext to explain the production of the disease through the agency of any other than a contagious cause." Cavallino, an historian of the plague which visited Malta in 1675, observes, that all public buildings which cautiously shunned intercourse with the community, enjoyed a perfect exemption from the contagion, among which were the prisons, monasteries, and the CAVALIERI occupied by the Knights of Malta.

In the second section our author traces the introduction of the plague into the casals, or inland towns and villages, and that on evidence guaranteed by written documents, supplied him by one of the captains of the Port of Malta, the nature of whose services afforded him peculiar facilities of procuring information on the subject of pestilential contagion.

"It is this officer's opinion, that wherever the plague makes its appearance, and proper measures are strictly enforced, *sur le champ*, its progress may be completely arrested, not only within the limits of the infected families, but may be prevented from extending even beyond the *individual attacked in the very first instance*, provided he be instantly removed out of the reach of communicating with others, and that the susceptible articles with which he has been in contact, undergo a thorough expurgation. The truth of this has been repeatedly exemplified during the late sufferings of Malta, the disease being arrested at once in several of the casals, in the houses originally contaminated, by the immediate adoption of rigorous and prompt measures of separation and seclusion, under the direction of the magistrates. In other casals, where these measures were either delayed, or were not so decidedly acted upon, the Plague spread to an alarming extent." 74.

For the contents of this section, and the whole of the fourth chapter, in which farther evidence in proof of the contagious property of the plague is drawn from the extent of contamination in each of the casals, we must refer to the work itself,

in which the reader will find important facts and powerful arguments.

In the 5th Chapter our author brings forward strong proofs that an impure state of the atmosphere, filth, crowding, and want of ventilation are, of themselves, insufficient to account for the generation of the plague. We can only glance at a few of these proofs. The *casal Zebbuy*, for instance, was ravaged to an extent far exceeding every other, though it is one of the most favoured spots, in point of locality, cleanliness, and ventilation, of any in Malta. On the other hand, the 14th Regiment and Artillery, quartered in one of the most infected parts of Valetta, and surrounded by a crowded neighbourhood, were preserved from the contagion throughout the whole period of the disease, by the early restrictions imposed by their commanding officers, and an unrelaxing vigilance to interdict every kind of intercourse with the public. But our author does not deny that an impure atmosphere, closeness, crowding, and filth, may powerfully predispose to render pestilential contagion more active, as they favour the progress and aggravate the malignity of other contagious diseases; he only argues that the specific contagion must also be present.

From accurate thermometrical tables, our author shows that *temperature* had little or nothing to do with the increment or decrement of the plague at Malta, since it was remarked that the thermometer stood at 76° when the last case was announced in Valetta, which was a degree of heat equal to that in which the contagion made its most rapid strides, at an earlier period in the same city.

“Finally;” says our author, “when to the whole of this body of facts we add the rapid diminution in the number of attacks following almost immediately upon the rigid enforcement of Police restrictions in the several towns formerly mentioned, and at a period when the contagion has attained to its acmé of diffusibility, no doubt, I think, can remain in any mind which is open to conviction, that it was to these measures alone the sudden cessation of the disease in those places was immediately to be attributed, and not to any alteration in the atmospheric influence.” 177.

Our author denies the validity of the commonly received opinion, that the plague arises and disappears at certain determinate periods of the year—“an assertion which is unsupported by fact, as the disease is known to commence in the same country under every diversity as to the seasons.” He instances the last two plagues at Malta, one of which commenced in December, three months previous to the appearance of the other.

PREVENTION OF THE PLAGUE.

"That as man continues, age after age, to disregard the lessons of experience, there is but a slender hope of his condition being materially improved, was the reflection of a profound observer;* and the force of it was indeed most fatally exemplified during the late Plague of Malta. Upon that unhappy occasion, the vigorous precautions, long sanctioned by the practice of mankind, and repeatedly proved to afford the only chance of protection against this insidious disease, were so tardily, or imperfectly carried into execution, that it became impossible to put an immediate stop to its progress." 197.

Long after the disease was detected in Valetta, on the late occasion, the decrees of public health were exclusively taken up with merely *recommending* measures of secondary importance, in place of peremptorily requiring obedience to those upon which the efficacy of every other depended!

"_____ to their decrees

"Dead to infliction, to themselves were dead." P. 200.

After a tiresome, ridiculous, and fatal system of trifling and procrastination, an effective police was at length instituted, on the third July, and the measures adopted were, *segregation and seclusion*, almost identically the same as were recommended by our author on the first appearance of the plague, the 5th of May preceding. These means were, in a very short time, followed by the most visible success; for on the 17th July, it was proclaimed that the contagion had received a decided check. The people were absolutely *incarcerated* in their houses, with the exception of the public officers, a measure that, on first proposal, was thought to be impracticable, till the experiment was tried in a single district and found to be perfectly successful. At this time no one was permitted in the streets, under pain of capital punishment. The same measures were extended to the casals. Provisions and necessaries of all kinds were carried to the houses of the inhabitants, and no shops were allowed to be open—in short, the people were, bona fide, in street quarantine, and to intimidate the refractory, a Maltese, who was detected concealing his illness, was publicly shot!

The 7th Chapter is on the symptoms, treatment, &c. of the plague at Malta; and here our author regrets that the experience of the medical authorities has been productive of but little accession to our knowledge, in respect either to the rationale or treatment. Our author's symptomatology of the disorder we shall pass over, as it was substantially published

* Volney.

some years ago in our respected cotemporary, the Edinburgh Medical and Surgical Journal. In that communication Sir Brooke was disposed to place no reliance on any prophylactics; further experience only enables him to offer a few observations respecting oil friction and vaccination. As to the former:—

“There were so many instances of persons living in the closest intercourse with the infected *who escaped without the use of oil*, and so few well-attested cases of persons having come into actual contact with pestiferous matter *who were protected by oil alone*, that I cannot hesitate to conclude that the opinion of its possessing any independent or certain prophylactic efficacy is destitute of foundation.” 232.

The prophylactic powers of vaccination are not rated by our author in a higher degree than the oil frictions, and therefore we shall say nothing of it.

TREATMENT.

In a disease of so multiform a character it was impossible, of course, to reduce the treatment to any thing like system; they were, therefore, obliged to confine their practice to obviating the most urgent symptoms. Our author adopted two principal indications:

“I. To moderate the symptoms denoting increased action of the arterial system, and especially those which marked considerable congestion in the brain.

“II. To sustain the powers of life when exhausted, and thereby to counteract putrescency.” 235.

With the first intention he employed bleeding, emetics, laxatives, sudorifics, refrigerants, and blisters; and with the second, tonics and cordials. In respect to blood-letting, our author contented himself with leeching the temples; and even this measure he thinks was unproductive of much benefit—sometimes perhaps of mischief, by favouring the subsequent debility. He does not mean to assert, however, that bleeding is always inadmissible in plague. Of the other means Sir Brooke speaks very briefly, excepting mercury, on which so favourable a report was made by Mr. Stafford, and already given to the world. The latter gentleman states, that thirty or forty cases terminated favourably under his care, when treated by this mineral.

The author had but two cases where he could fairly try the cold affusion, “and in one of them it was followed by decided and immediate amendment.” The patient was almost instantaneously relieved from the distress of a dry, heated skin, and there succeeded a copious diaphoresis, with great abatement of the restlessness, and an inclination to sleep. A very

remarkable instance is related, where the patient leapt twice into the sea, and speedily recovered. Upon the whole, our author thinks the remedy worthy of a trial, at the very beginning of the disease.

The work closes with a detail of cases under the author's own care in the Pest Hospital, and a copy of his examination before the Plague Committee of the House of Commons.

The perusal of this volume has left a strong impression on our minds in favour of the good sense, extensive erudition, correct judgment, and acute observation of its excellent author. We think too, that the facts and arguments brought forward by Sir Brooke Faulkner, must carry conviction, respecting the contagion of plague, to every mind not warped by the cloud of incomprehensible quiddities and cavils, which seems to have settled over the intellects of some of our brethren, and completely blinded them to the most plain and obvious facts, while they are straining their mental optics after invisible bodies which nowhere exist, except in the dis-tempered imagination.

IV.

The Principles of Midwifery; including the Diseases of Women and Children. By JOHN BURNS, Regius Professor of Surgery in the University of Glasgow, &c. &c. Fifth and enlarged Edition. London, 1820.

THE work which stands at the head of this article, has attained the honourable rank of a *fifth* edition—no inconsiderable proof of merit in a strictly professional publication. In glancing over an elementary work of this magnitude and standing, it can only be expected that we make a few cursory remarks on such practical points as attract our attention by the doubtful nature of their tendency, rather than their merits—for to particularize *these last* would require a space more than equal to the whole Journal.

We shall therefore confine ourselves to a review of the subject of PARTURITION, which entirely occupies the second Book of the Volume.*

Dr. Burns, at page 341, describes the common method of examining for the purpose of ascertaining the existence and

* The following critical notice of Dr. Burns's work has been kindly furnished us by a Physician-Accoucheur of great talents and experience, and an author who is frequently quoted with approbation by Dr. Burns himself.—*Ed.*

progress of the labour, and adverts to the method proposed by Dr. Power, of trying a pain by examining the state of the uterus through the parietes of the abdomen. We need hardly tell our readers, that Dr. Power considers the application of the hand on the abdominal parietes, as affording a "very delicate and excellent mode of trying a pain; the information it gives is most important and uniformly correct; no genuine parturient action is without it; and when perfect, no false or unprofitable action is ever found co-existent with it, its presence evidencing the existence, and its absence the want of the true energetic internal principle."* It is always gratifying to find practitioners, under different circumstances, agreeing in opinion respecting such facts as may lead to practical improvement. We should have been pleased to find Dr. Burns's experience coinciding with that of Dr. Power, on this certainly very delicate, and therefore desirable mode of trying a pain. But his expressions of approbation are by no means strong; all that he says upon the subject is, "the application of the hand to the abdomen during the continuance of the pain, may ascertain from the temporary hardness of the uterus, that its fibres are contracting universally. This mark has been properly insisted on by Mr. Power in his ingenious Treatise on Midwifery, p. 25." We seem to want further evidence on this important point of practice. For ourselves we can say, that either from a want of the true fact, or some other cause, we have not so uniformly obtained by this mode of examination the required information, as we had confidently expected, yet certainly on some occasions the knowledge thus acquired has been quite satisfactory.

In the chapter on Presentations of the superior Extremities, Dr. B. notices the spontaneous evolution of the Fœtus, and discusses the different theories of Drs. Denman, Douglas, and Kelly, respecting this curious phenomena, without attempting to decide between them. He concludes his observations by stating the following very important fact, viz. that in the city where he resides (Glasgow) the number of the inhabitants not being less than 150,000, one case only of the spontaneous evolution has been known to occur. Now as some women, with arm presentations, have died undelivered in that city, and as others have lost their lives, because delivery by turning was not effected till too late, it follows of course, that the spontaneous evolution is not to be depended upon. This then should operate as a caution against delay, and teach us

* Power's Treatise on Midwifery, developing new principles, &c.

not to wait, in vain hopes, that Nature will be competent to overcome the difficulty, but to proceed as early as practicable to effect delivery, by the old and well-tried method, turning the child, and extracting it by the feet.

The principal novelty in this edition is to be found in the chapter on *Tedious Labour*, on which Dr. Burns has written largely, and recommended the revival of a mode of practice gradually becoming, if not already become, obsolete.

It is well known, that the custom was formerly very prevalent of employing manual assistance to dilate the os uteri and vagina in all cases of slow labour, and very often in labours of a more active character. To so mischievous an extent, indeed, was this practice carried, that the teachers of midwifery, and the better informed practitioners, found it necessary to unite in inculcating the impropriety and danger of such proceeding, and more especially Dr. Hunter, whose reliance on the powers of Nature was almost unlimited, and to whose opinions great deference was paid, enjoined his pupils and others to leave the entire process of childbirth to Nature alone. The improvement which midwifery, as a science, derived from the doctrine thus promulgated, that Nature alone was equal to the power of effecting delivery in ordinary cases, was soon evident. It led to a more perfect and more extensive knowledge of the mechanism of parturition, and taught that it was safe to trust to Nature, in some preternatural positions of the child, viz. in breech and feet presentations; nay, it produced still further good, by showing, that in cases most urgently requiring artificial aid, Nature, if properly managed, was capable of doing a great deal, and that she ought, in all cases, to be considered as our firmest and most efficient ally.

It must, however, be admitted, that on some occasions this valuable rule of trusting to Nature has been perverted. By some, Nature, instead of being considered abundantly efficacious, has been thought all-sufficient; and in the absurd supposition that Nature could never fail, some accoucheurs have been found waiting, with dilatory, if not culpable, patience, for the natural termination of the labour, till the parturient woman has been exhausted with suffering, and the opportunity of doing good by the timely interference of art has been irretrievably lost.

The danger, thus to be feared from injudicious delay, has been foreseen, and all writers, even the most strenuous in deprecating premature interference, admit, that a time may arrive when the assistance of art must be given. Their rules respecting the period for interfering apply, however, only to labours of long duration: no modern author seems to have

contemplated the propriety of employing artificial assistance during the first stage of labour. We have met with no book before this, which lays it down as a general rule, that the first stage of labour ought to be made to terminate within twelve hours of its commencement.

“ In the case I have just considered, I have spoken of the effects of dilating the os uteri, but I do not mean to say, that the practice is useful in such a case alone ; for, in most cases of tedious labour, it is beneficial, and, as the subject is important, I shall explain my sentiments on it fully. Forcible and irritating dilatation of the os uteri, even when it is not productive of dangerous consequences, is apt to occasion irregular or spasmodic action of the uterus. Two circumstances are necessary to render it safe : the os uteri must be lax and dilatable, and the dilatation must be gradually and gently effected during the continuance of a natural pain. If attempted in the absence of pain, and especially if attempted so as to give pain, it is apt to excite partial or spasmodic action, and under any circumstance, violent or forcible dilatation, besides injuring the uterine action, may lay the foundation of future disease. It is done best by pressing on the anterior edge of the os uteri, during a pain, with two fingers, with such moderate force as shall not give additional pain, and shall appear to excite the natural dilatation as much as to produce mechanical opening. By doing this for several pains in succession, or occasionally during a pain, at intervals, according to the effect produced and the disposition to yield, we shall soon have the os uteri completely dilated. This is an old principle, but it was rashly practised, and too universally adopted, which made it meet with just reprobation, and some, knowing this, may be surprised at meeting with such an advice in modern times. Let not the principle suffer from its abuse, else where is the plan which could stand its ground ? It is perfectly clear, that when the process is going on well, interference is improper, but it is no less evident, that if a long time is to be spent in accomplishing the first stage of labour, or dilatation of the os uteri, the vigour of the uterus and strength of the patient may be impaired so much as to render the subsequent stage dangerously tedious, or to prevent its completion, at least consistently with safety ; the first stage of labour ought always to be accomplished within a certain time, varying somewhat according to the constitution of the patient, and the degree of pain. It is an undeniable proposition, that there is in every case a period beyond which it cannot be protracted without exhaustion ; and it is no less certain, that if we wish to avoid this exhaustion which may be followed by pernicious effects, we have only the choice of either suspending the action altogether for a time, or of endeavouring to render it more efficient, and of effecting the desired object within a safe period. The first is sometimes adopted, but is not always practicable, nor is it always prudent to counteract uterine action by strong opiates. The second is safer, and one of the means of doing so is that under consideration. If the pain be continuing without suspension, or an interval of some

hours, and the labour be going on all the time, but slowly, it is a good general rule to effect the dilatation of the os uteri within ten or twelve hours, at the farthest, from the commencement of regular labour. This is done, if the os uteri be flat and applied to the head, by the method above described. If it be somewhat projecting, it is aided by introducing two fingers, and extending them laterally with gentleness, during a pain. The dilatation is easily and safely effected, if the case be proper for it ; if not, bleeding, or an opiate, if the former be not indicated, will soon bring about a favourable state. Of the benefit and perfect safety of this practice I can speak positively, and am happy to strengthen my position by the authority of Dr. Hamilton, who makes it a rule to have the first stage of labour finished within a given time. I need scarcely, however, add that, in enforcing this rule of conduct, it should be recollected that, to render it proper, the pains must be continuing so often and so decidedly, that the patient can be said to be in actual labour all the time. There are many cases where pains, at first regular, have gone off for many hours, or where they have come occasionally in a dull slight way, for a couple of days, but they have given little inconvenience, have scarcely interrupted sleep, and had little effect on the os uteri. They are more of the nature of false pains : the patient can hardly be said to be in labour, and is in no respect fatigued. If interference be proper in such cases, it is by other means, by opiates, by enemata, or remedies and applications evidently pointed out by the nature of the pains which have formerly been considered.

“If, again, in lingering labour, the membranes be entire, the os uteri soft, lax, and considerably dilated, and the presentation natural, it is allowable and beneficial to rupture the membranes ; and this is more especially proper, if the uterus be unusually distended. The evacuation of the water is succeeded by more powerful action, a circumstance which, whilst it points out the advantage of the practice in the case under consideration, forbids its employment in natural labour, where the process is going on with a regularity and expedition, consistent with the views of nature, and the safety of the woman.” *Burns on the Principles of Midwifery*, 401-2-3.

We must hesitate to call in question the propriety of a practice, recommended by an accoucheur of so much experience and judgment as Dr. Burns, and sanctioned by the authority of Dr. Hamilton ; especially as Dr. Burns limits the practice, by admitting many exceptions to his general rule. Yet we cannot avoid remarking, that there is less of precision in the rule laid down than we admire.

The principle inculcated is, that the first stage of labour ought always to be accomplished within a certain time, which, we are afterward told, ought not to exceed ten or twelve hours, from the commencement of the labour. But the term commencement of labour is very vague and indeterminate. By some the commencement is dated from the first appearance of discharge tinged with blood from the uterus :

but this is a very unsatisfactory evidence of labour. By others, the period of commencement is dated, at the occurrence of pains, but pains, spurious or preparatory, are often felt for hours and days before there is any, the slightest dilatation of the os uteri. Others again, refer the commencement of labour to the time when the os uteri begins to open: but a patent state of that orifice, even though accompanied with pains, does not always indicate the actuality of labour.*

How then, we ask, are we to know when labour commences? In what does it exist? Dr. Burns defines labour to be "the expulsive effort made by the uterus for the birth of the child." Now our idea of an expulsive effort of the uterus is this, that first the fundus and body contract, and thus force the contents of the uterus towards the orifice, thereby pressing the os uteri lower into the vagina, and gradually dilating it, or rendering it thinner. The uterine effort then consists of a series of actions: viz. 1st. contraction; 2dly. propulsion; 3dly. depression, attenuation, or dilatation. If this be a correct definition of the expulsive effort of the uterus, or, in other words, of a labour pain, then, as soon as this series of actions commences, labour begins. But a finger in the vagina will frequently discover this expulsive effort before the os uteri is dilated to the size of a sixpence; and a continued succession of these well-marked efforts may proceed regularly for many more than twelve hours, before the os uteri is open to the size of a shilling. It is clearly not Dr. Burns's intention to recommend, that the first stage of labour shall always be terminated within twelve hours from this period. Even then, if we were to admit the correctness of the principle, we think that it is not explained with all that distinctness for which, in many other particulars, Dr. B. is entitled to deserved praise.

But our own experience does not warrant us to admit the correctness of the principle, or to receive this doctrine as a general rule. It seems to us, that the practice of dilating the os uteri is admissible only in a few cases, and applicable only after the labour has made a certain degree of progress. The stages of labour have been divided by some authors into three, by others into four periods. Dr. Burns prefers the first division, we are better pleased with the other; which exactly

* The first case in Chapman's Midwifery is strongly in point. "The mouth of the womb was fairly dilated, even enough to have admitted the hand;" but the pains were short and imperfect," that is to say, they were spurious, there was no uterine action. A composing draught and rest in bed relieved the pains, and the patient was not delivered till three weeks after.

divides Dr. B.'s first stage into a first and second. If the labour be thus divided, we would say, that in the cases supposed to require this kind of manual dilatation, the attempt ought not to be made, till the first stage is completed, nor then, except with very great caution; for it must never be forgotten, that the attempt to effect artificial dilatation, if not positively useful, is always positively hurtful.

If Dr. Burns differs from other writers respecting the management of the first stage, so does he in some degree, upon the use of instruments in the further progress of the labour.

The practitioners of midwifery of the last century seem to have been much too officious, in the use of the forceps, and other extracting instruments. To prove this, we have only to refer to the works of Chapman, Gifford, Burton, Smellie, &c. And there we may likewise learn, that in many of these instances, the necessity of employing instruments arose out of the improper means resorted to, for the purpose of hurrying through the early period of the labour. The same authorities, which were the cause of altering the practice at the commencement of the labour, effected a change likewise as to the use of instruments towards its termination. From being too precipitate in affording artificial aid, it is probable that the accoucheurs of the present day may have fallen into the other extreme of being too tardy in giving such kind of assistance. Certain it is, that any instrumental interference has been decried in the most pertinacious manner, by some writers of great eminence. And the dread of employing instruments not only prevails in our own country, but on the Continent. Professor Boer, of Vienna, we are told in the *Quarterly Journal of Foreign Medical Literature*, "almost scoffs at instruments, and like Dr. William Hunter, sums up his advice for difficult cases in the word—patience." So Madame Boivin, midwife to the Hospice de la Maternité, at Paris, boasts of the infrequency of instrumental assistance in that establishment, while she accuses the English practitioners of too great a fondness for such interference. Now, though it must be admitted, that it is essential to the character of a good accoucheur, not to be forward in interposing instrumental aid, yet the abstaining from instruments altogether cannot be the best criterion of his abilities. The preservation of the lives and of the future health and comfort of his patients is the paramount obligation of the accoucheur, and when these cannot be secured by patience, but may in all human probability by instruments, it becomes his duty not to delay their use.

These arguments have evidently been well considered by Dr. Burns. He says, p. 419.

"I have fully, and I hope practically detailed and considered the causes which render labour tedious, and have pointed out the impropriety of permitting the first stage to be protracted, for thereby the uterus becomes enfeebled, and less able to accomplish the second. But when this advice has not been acted on, or when the treatment proper for the particular cases already described, has not been successful in effecting delivery, what is the consequence ultimately of delay? The uterus, by continued, but inefficient action, or unavailing contraction, becomes gradually debilitated; and when at last delivery is effected, it cannot contract with vigour and regularity, whereby hæmorrhage is occasioned, or the same event is produced by spasmodic action of the uterus. Here then, is one very serious evil which may be anticipated. Next, there is a strong disposition given to puerperal disease, not merely to those troublesome, though less dangerous complaints, known under the name of *weeds*, or irregular febrile paroxysms; but also to more formidable affections, of an inflammatory nature, especially of the womb or peritoneum. Accordingly, we find that a much larger proportion of women die after protracted, than after natural, labour. Here then, is another class of evils to be apprehended. Again, although the same local mischief is not so apt to take place, that we meet with in locked head; yet, the patient is not exempted from risk even of that: by continuation of labour, the soft parts at last inflame and swell, which adds not only to the difficulty of delivery, but also greatly to the danger of the case. If it be necessary to enumerate other hazards, I may set down the consequence of protracted irritation and exertion, marked by the induction of a state of fever, and at last of great exhaustion, insomuch that the patient may actually die undelivered, but this event, as well as rupture of the uterus, is less apt to occur than in locked head. Besides all these hazards to the mother, the child is in danger of perishing, not from compression of the brain, but from the continued pressure of the uterus, after the evacuation of the water, interfering with the regular performance of the function of circulation. These are surely no trivial evils resulting from protracted labour; and the utmost that I feel at liberty to concede in favour of delay, is, that it may be permitted longer in cases of arrest, than of impaction. Many eminent men have placed an undue confidence in the power of nature, and have been hostile to the use of instruments. For a long time I was influenced by the high authority and plausible arguments, as well as bold assertions of these practitioners, but experience has compelled me to adopt the opinion I am now, with a firm and solemn belief of its correctness and importance, to maintain in this chapter. From the strength of the recommendations of the partizans of nature, we should suppose, that whenever the child could actually be born without aid, no hazard occurred, and, on the other hand, that instruments must of necessity prove not only very painful in their application, but dangerous in their effects. Now, the first supposition is notoriously wrong, for innumerable instances are met with, where the mother does bear her child, without artificial aid, and much, doubtless, to the temporary exultation



of the practitioner, but nevertheless death takes place, or, at the best, a tedious and bad recovery is the consequence. The second supposition is just as positively unjust; for in the majority of cases, if the practitioner be humane and gentle, the introduction of the instrument gives little or no pain; insomuch so, that in many books we meet with strong and just reprehension of the clandestine and unnecessary use of instruments, which could never possibly take place, if their application were attended in such cases with much pain. Then, as to the pain occasioned by extraction, that may be greater than the patient was just before suffering, and yet not be greater than is often experienced in a natural labour; or even granting it to be uniformly greater, a concession I make for the sake of argument, it is but for a short time, and, on the whole, the suffering of the patient is less than if nature had been allowed at length to expel the child. These positions are perfectly correct in all cases of arrest when the practitioner is well instructed and cautious. Next, as to the danger to be apprehended, I cannot in cases of arrest see any source whence it can arise. The mere introduction of the forceps, if gently accomplished, can scarcely be more hazardous than the introduction of the finger, for no force is, or ought to be exerted. If there be hazard, it must be in the process of extraction, and this, it is evident, can arise only, either from pressure of the instrument on the soft parts, or from the head and instrument lacerating the perineum. The last event must, in general, be the consequence of want of caution, and the first can never be carried to any dangerous degree in a case of arrest, if the operator know how to direct his efforts." 420-1.

Dr. Burns afterward enforces his arguments by referring to the tables published by Dr. Breen, calculated from the register of the Dublin Lying-in Hospital.

"In the course of 57 years, 78,001 were delivered, of whom one out of every 92 died, and one child out of every 18 was stillborn. Let us now see the result of tedious labour.

In women, who were in labour of their first child from between 30 to 40 hours, one in 34 died, and one child in 5 was stillborn. Here then is a prodigious difference between even the average result of all labour, good and bad, and a protracted labour. During the same period of labour, among women who had previously borne children, and therefore, if requiring instruments, might be supposed to have a more permanent obstacle or contracted pelvis, though this is not stated, about one in every eleven died, and one child in every six was stillborn.

"When labour was protracted, between 40 and 50 hours, in women who had not previously borne children, one in 13 died, and the proportion of stillborn children was as one in 3 1-3.

"If labour were protracted other ten hours, that is, between 50 and 60, one-eleventh of the women died, and when we proceed to the period of between 60 and 70 hours, one-eighth died, and nearly one-half of the children. It is observable, however, that only one-

twelfth died in the next ten hours, but this variation must arise from accidental circumstances.

"It is impossible to give any comparison of these results, with those afforded in the same hospital by the use of instruments, for artificial aid, it is evident, was always long delayed, unless in cases where dangerous symptoms not essential to labour occurred. Instruments were used, on account of tedious labour in 44 cases, and of these 18 died.

"Now, taking the proportion of deaths in the parturient state to be, including all disasters whatever, as 1 in 92, it is most important to observe the progressive fatality arising from delay. Suffering above 30 hours destroys one in 34; in other 10 hours the danger more than doubles, for 1 in 13 die: then 1 in 11, and next 1 in 8, to say nothing of the children." 423-4.

Upon the whole, we think, that Dr. Burns has put in a very proper point of view the theory and practice of instrumental aid. It has fallen to our lot on various occasions to regret, that recourse to the forceps had not been more early sought. We have witnessed several instances in which the life of the child has been lost, for want of seasonable assistance from these instruments, and sometimes the mother has been placed in a very unwarrantable state of hazard from the delay. While therefore we join heart and hand with those who deprecate the hasty and intemperate use of instruments, we as earnestly insist upon the propriety of having timely recourse to them, when the circumstances of the labour indicate a want of power in Nature to discharge her duty satisfactorily.

The instructions for introducing, and acting with, the forceps, are sufficiently clear and intelligible. Dr. Burns seems not anxious to recommend any particular form of forceps. It is with this as with other instruments, the more simple, generally the more manageable. Dr. Burns allows the long forceps to be introduced upon some occasions, but very judiciously cautions practitioners not to be too confident with them. In our opinion it is a very hazardous instrument. In a narrow pelvis, we have never known it save the life of the child, and we do know some cases, in which it occasioned extreme suffering and distress to the mother.

But reflecting that we are reviewing the *fifth* edition of an elementary work, we find our limits considerably exceeded.

Dr. Burns cannot fail to impress every reader with a high respect for his talents, his judgment, his unwearied industry—and last, not least, his ardent zeal for the promotion and diffusion of obstetric science. The volume is a real treasure to the general practitioner, as containing an almost inexhaustible store of the most valuable and concentrated information. Well may our author conclude his preface in the following terms.

"I do, however, sincerely trust, that the precepts I have inculcated will be found agreeable to experience ;—and, on a review of the whole, I cannot say that I have either wasted the reader's time in idle theory, or misled his opinion by mere speculation."

The whole work has been carefully revised, and the additions to this impression exceed one hundred pages.

V.

1. *A Chymical and Medical Report of the Properties of the Mineral Waters of Buxton, Matlock, Tunbridge Wells, Harrogate, Bath, Cheltenham, Leamington, Malvern, and the Isle of Wight.* By CHARLES SCUDAMORE, M. D. Member of the Royal College of Physicians, of the Medical and Chirurgical Society of London, &c. &c. Octavo, pp. 265. London, 1820.
2. *Practical Observations on the Medicinal Powers of Mineral Waters, and of the various Modes of Bathing, &c. &c. &c. with Remarks on Exercise and Diet.* By PATRICK MACKENZIE, M. D. Licentiate of the Royal College of Physicians, and Assistant Physician to the Fever Institution of London. Octavo, pp. 216, 2d Edition, enlarged. London, 1820.

Good and evil are almost as intimately blended in the moral and physical world around us, as nerve and blood-vessel in the wonderful microcosm within us. If the earth pours forth miasmata that scatter sickness and death among all within their range, she also distils from her secret recesses salubrious springs, to revive the drooping invalid, expurgate the pampered epicure, and dispel those physical sources of melancholy that sap the foundation of human enjoyment, or absolutely abridge the range of life.

The sensible qualities of mineral waters must have attracted attention at a very early epoch, and accident, of course, discovered their medicinal virtues. That they should be held in great veneration during ages of ignorance and superstition is not to be wondered at. Pliny informs us that the ancients attached a tutelar divinity, the friend of mankind, to each medicinal spring. The moderns have converted this idea into a reality, with considerable additions and improvements. Few medicinal springs are now unattended by numerous tutelar guardians, the friends of mankind, and who, though not actual divinities, are often regarded as little less, by those who invoke their aid in the recovery of health.

It is undoubtedly of much greater consequence to ascertain, with accuracy, the *effects* of mineral waters on the human frame, in health, and in the various states of disease, than to analyze their constituent principles. But to effect the former purpose, it is requisite that a man should rigidly observe and examine, uninfluenced by any of those little biases or partialities, which are so apt to insinuate themselves into the human breast, where personal interests are concerned. A physician, therefore, who visits various medicinal springs, for the purpose of reporting on their physical properties, is very likely to be impartial; but the shortness of his stay is likely to be attended by a deficiency of observation and experience. We must be contented with this mixture of good and evil here as elsewhere.

Dr. Scudamore, already so well and so favourably known to the profession, having visited several of the most remarkable watering places of this kingdom, in the autumn of 1819, was naturally led to examine the state of their mineral springs, and soon found reason to suspect the fidelity of the existing sources of authority respecting them. This again led him to an extensive inquiry into the subject, in which he had the able assistance of Mr. Garden of London. They made the preliminary experiments at the springs of Buxton, Harrogate, and Tunbridge Wells; but, except at these places, the shortness of their stay did not permit them to examine the gases in the usual method. "The greater part of the waters were wholly examined as to their solid contents in London." Here, in addition to Mr. Garden's skill, our author had the advantage of that of J. G. Children, Esq. whose contributions appear frequently in the work. Dr. Scudamore's reasons for appearing before the public, on the present occasion, are, that the waters of Buxton had not been examined since 1784, and those of Harrogate not since 1794. Modern chymistry has, since these periods, afforded improved methods of analysis, and led to new reasonings on the medicinal properties of mineral waters.

After some preliminary observations on chymical tests, our author commences with Buxton.

§ 1. This far-famed resort of invalids is a considerable village in Derbyshire, distant 159 miles from London, the surrounding country being a wild mountainous district, thinly inhabited, and presenting a rude character of scenery. The village itself is situated in a valley surrounded by hills. The Buxton mineral water rises freely by numerous fissures through the limestone, and is conducted from the spring-



head, by an artificial sandstone channel, into a large marble basin, open to the air in front, and secured from intrusion by an iron gate. On emerging from the earth, its temperature is 82°—in the basin 77°. The water is transparent, odourless, tasteless—affecting neither litmus nor turmeric paper. Specific gravity 1.0006, at the temperature of 60; but at the spring head, 999°. The action of re-agents led Dr. S. to the conclusion, “that this water contains muriatic acid and sulphuric salts with bases of lime and magnesia, in small proportions.” 12. Analysis of the gaseous and solid constituents developed the following substances in one gallon of the water; viz. carbonic acid 1.50 cubic inch—azote 4.64 ditto; muriate of magnesia .58; muriate of soda 2.40 grs. sulphate of lime .60; carbonate of lime 10.40; extractive matter and vegetable fibres .50; loss .52; total 15 grains.

Medicinal Qualities. As an internal remedy, this water is not so celebrated as the baths externally; yet their reputation is considerable. From the very small proportion of ingredients, some physicians have denied these waters any other virtues than those of common warm water; but, as Dr. S. justly observes, the state of very minute division in which the substances are, may enable them to act with considerable energy on the sensible surface of the stomach, when empty, and thus be rapidly absorbed into the torrent of the circulation. Nevertheless, Dr. S. is induced to believe, that “the medicinal action of Buxton water must be referred to its purity, its temperature, and its gaseous impregnation with azote.” 19.* Simple as it appears in composition, it occasionally proves inconveniently stimulating to some invalids of full habits and sanguineous temperament, who complain of flushing, head-ach, and slight giddiness that deter them from proceeding. In Dr. S.’s experience, this water has excited gout. In general, one or two doses of aperient medicine should precede the use of the water; and arthritics should not begin a course of it until they are freed “from every discoverable sign of an active state of the gouty diathesis.”†

The first dose of the water (about half a pint) should be taken an hour before breakfast, and where the bath is used, after, not before, that operation. The dose should be taken

* “Buxton water is remarkably pure, and differs from common spring water only in its temperature; and the small quantity of azotic gas which it holds in solution.” *Mackenzie, 2d Ed. p. 37.*

† Dr. Mackenzie remarks, that “it appears to produce various effects on the bowels—not unfrequently a diarrhoea, or looseness succeeds, for a few days, its use. *2d Ed. p. 39.*”

at twice, with the interval of a quarter of an hour, using moderate exercise the while. At 12 or 1 o'clock, the dose may be repeated in the same way. In a week or ten days, the total quantity, *per diem*, may be increased to a pint and a half. There is rarely any advantage in proceeding beyond that quantity. If the water prove too stimulating, it should be discontinued for a time, and proper means taken to reduce the inflammatory excitability of the habit, after which it may be resumed.

"When the water agrees perfectly well, it sits pleasantly on the stomach, is refreshing, by degrees produces a sensible improvement of the appetite, assists the digestion; and, thus amending the functions of the stomach, conduces to the general strength of the body, and consequent cheerfulness and comfort of mind. In concluding with a general medical character of the water, I may affirm that it proves very generally beneficial to the dyspeptic patient; and that it is a valuable auxiliary to the use of the baths. In the condition of stomach which gout produces, and also in the state of constitution which is associated with chronic rheumatism, the internal use of the water has in many instances within my knowledge afforded decided benefit; and, therefore, although it be less sensibly active in its properties than some of the other waters of which I treat in this little volume, it deserves, I am persuaded, to be regarded as considerably medicinal and useful." 23.

At Buxton are constructed cold, warm, and vapour baths, with every degree of convenience, except in ventilation and dressing apartments, of which our author complains. The temperature of the public and private baths is 82°. A considerable quantity of free azotic gas rises in bubbles to the surface of the baths.

Before the invalid enters on the use of the bath, he should adopt some preliminary preparation. If, for instance, there be marks of congestion about the head, cupping or leeching may be proper. If the tide of the general circulation be increased, venesection will be more appropriate. Some suitable aperient medicine should also be premised, and the alvine excretions constantly attended to afterward. Mercurial medicine should, of course, be avoided during the use of the bath. "The temperature of 82° is not sufficiently high to favour that action of the skin which conduces to the safe and favourable action of mercurial alteratives." 29.

"The class of patients resorting to the Buxton bath comprise, for the most part, those who have suffered either from gout or rheumatism. But it is by no means equally proper for the gouty and the rheumatic invalid under circumstances apparently similar. I should forbid the use of the bath to a patient actually suffering the pains of chronic gout; and I should consider him to be requiring suitable

medicines to remove such a diathesis, as an essential preliminary. The bathing will be a valuable remedy to relieve that debility of limbs, and of the whole constitution, which is a common sequel to chronic gout, and which seems to partake very much of the character of rheumatism. When gout from the frequency and severity of its attacks, has not only debilitated the limbs in a serious degree, but has also weakened the constitution, so that the circulation is very languid, and the nervous system much depressed, it appears to me that a course of warm sea bathing, sea air, and friction, should precede the visit to Buxton; or, if circumstances do not allow this arrangement, the warm bath at Buxton may be the previous remedy, the temperature being gradually reduced to prepare the patient for that of 82°." P. 30.

When any degree of acuteness is perceptible in rheumatism, our author thinks the bath of Buxton improper or actually injurious. "But flying pains, with a natural state of the pulse, do not constitute an objection." It is where the various textures concerned in muscular motion are weakened, attended with lameness, stiffness, and irregular pains, particularly in damp weather, and before atmospherical changes, that the Buxton bath produces the happiest effect.

Excepting where there is much constitutional debility, the patient should bathe before breakfast, and that by *plunging* in. The stay, at first, should not exceed one or two minutes; and if a pleasant reaction or universal warmth succeed, the bath agrees; and *vice versa*. Dr. Scudamore is convinced that the good effects of this bath would be greatly enhanced by friction or shampooing put in force immediately after leaving it.

Our author praises the air of this place, as remarkable for its bracing qualities. Although its hilly site renders the climate variable, the rains are quickly absorbed, and the atmosphere is comparatively dry. Neither is the vicinity devoid of interesting scenery, and the invalid, at little expense or trouble, may see the "seven wonders"—not of the world, but of the Peak.

Besides the tepid springs of Buxton, there is also a chalybeate, of weak impregnation, but which, when necessary, may be strengthened by the tinctura ferri muriatis.

§ II. MATLOCK, 22 miles southeast of Buxton, situated in a valley close to the river Derwent, is overhung by mountain scenery of the highest order of picturesque beauty. Its fountain differs little in sensible properties from common spring water, except in temperature, which is 68°; hence, in taste, it approaches to tepid. It is beautifully clear, but

not very sparkling: its specific gravity at 60°, being 1.0003. From the effect of re-agents, our author concludes, that the water contains free carbonic acid, and some muriates and sulphates in minute proportion, whose bases are probably magnesia, lime, and soda.

"I do not feel authorized to extol the water as a relief for any particular class of disorders. Its purity, its agreeable temperature, and its freshness, ensure to the invalid that, while it has the chance of being in some measure useful, it will not disagree. The immediate impression on the stomach is more grateful than that occasioned by ordinary spring water; is more tonic; and when attention to regimen is joined with a course of it, much decided advantage may be expected." 44.

There is a natural bath at the temperature of 68°, which is just intermediate between Buxton and the sea. It produces a slight shock, less than the cold bath, and which is soon followed by a re-action, and an agreeable glow. It is inefficient in rheumatism, and for the most part "inapplicable for a gouty person." 46.

§ III. TUNBRIDGE WELLS. This section is almost a literal reprint of Dr. Scudamore's former publication on these waters in 1816. In order not to break the chain of our analysis, we shall consider this section in the same manner as the others. This fashionable watering place is situated in the weald of Kent. The spring rises into a large marble basin, overflows into a channel connected with the chalybeate cold bath, and, in its progress, deposits a reddish brown precipitate. The fresh water is perfectly transparent, and without air bubbles, exhaling a distinctly chalybeate odour, with a strongly marked taste, neither acidulous nor saline, and by no means unpalatable. Our author's experiments lead him to conclude, that the spring rises from a great depth—that it contains iron, in probably no very slight proportion—that this iron is combined with carbonic acid—that free carbonic acid is contained in the water, together with a carbonated earth, lime, combined sulphuric acid, and muriatic salt. The water appears to contain about $7\frac{1}{2}$ grains per gallon of ferruginous and saline ingredients. In respect to its gaseous contents, it was found to present per gallon, 8.05 cubic inches of carbonic acid—.50 of oxygen—4.75 of azote.

The chalybeate spring, behind the Sussex hotel, contains little more than a grain of iron in the gallon of water.

Medicinal Properties. Dr. Saunders observes, that "the most noted of the simple chalybeates in this country is that of Tunbridge Wells." Dr. Scudamore adds, that

“The mildness and salubrity of the air, joined with the remarkable beauty of scenery in the surrounding country, render Tunbridge Wells a situation of resort for the invalid at once valuable and delightful.” 71.

The very minute proportion of iron in these waters has induced some people to be sceptical as to their powers. But medical and chymical writers agree, that the most active form in which iron can be administered as a medicine, is in the state of solution by carbonic acid. Dr. S. has shown, that the iron continues in perfect solution in this water, at a temperature a little beyond 140°, a heat full 40 degrees higher than that of the human stomach. Hence, he thinks that, in this state of perfect chymical activity, it exerts its agency in a very direct manner over the whole surface of the stomach to which it is applied. He thinks it probable, also, that the mineral may partly find its way into the torrent of the circulation, in its entire state of solution. The action of the carbonic acid and the azote is also to be considered.

On all occasions some aperient medicine should be premised, after which, the patient is to take the first dose at 7 or 8 o'clock in the morning; the second at noon; and the third about 3 in the afternoon. The quantity must vary with the case; but it is best to begin with small doses, taking in all, from half a pint to two pints daily.

The principal diseases to which the Tunbridge waters are applicable, are dyspepsia, from debility of the stomach, with languor and nervousness—uterine debility—chlorosis—cutaneous complaints, especially of the scaly species, connected with weakness of stomach—gravel, founded on unhealthy condition of the digestive organs.

“Its general operation is to increase, in a gradual manner, the tone of the secretory system, and by the permanency of its tonic power, to augment the strength, nervous energy, and vigour of all the functions of the body. It is, therefore, in those chronic diseases that arise from slow beginnings, and are attended with great laxity and debility of the solids, that this water is particularly indicated.” *Mackenzie, 2d Ed. p. 69.*

Dr. Scudamore considers the most favourable period for employing the waters of Tunbridge Wells, to be from May to November.

§ IV. HARROGATE, is situated agreeably in the centre of Yorkshire, 211 miles from London, the whole neighbouring district abounding with mineral springs, principally sulphuretted and chalybeate.

From the Old Sulphur Well, the only one now resorted to for drinking, the water rises at first transparent, with a very strong sulphureous and fetid smell, which has been compared to the washings of a rusty gun-barrel. The taste is saline and disagreeable. If this water be bottled at the spring, and immediately corked and sealed, it retains its gas and all its virtues for a long time—even for months. The temperature of the water is 54°. The action of tests led Dr. Scudamore to presume, that it contains muriatic and sulphuric acids, united to lime and magnesia, with a strong impregnation of sulphuretted hydrogen gas. The portion of gas insoluble in water, consists of carburetted hydrogen and azote, in nearly equal volumes. Dr. S. and Mr. Garden give the following composition in one gallon of the water:—

Gaseous Contents. Sulphuretted hydrogen, 13.716 cubic inches—carbonic acid, 9.529—azote and carburetted hydrogen, 5.800—total, 29.045 inches.

Solid Contents. Muriate of soda, 760 grains—muriate of lime, 32 grs.—muriate of magnesia, 28 grs.—sulphate of lime, 8 grs.—carbonate of lime, 12 grs.—carbonate of magnesia, 3 grs.—loss 5 grs. Total, 848 grains.

Medical History, &c. Previous to using the Harrogate waters, some preparatory treatment is generally necessary. The plethoric should lose a few ounces of blood, either from the arm or by cupping; while a mercurial cathartic should be administered, to clear the *primæ viæ*. When there is indication of a sluggish circulation in the abdominal organs, or congestion in the portal circle, a course of eccoprotics, as the blue pill, and aloetics every second night, should be enjoined. In general this water is not sufficiently aperient of itself, and therefore requires an auxiliary. The patient should rise early, and drink the waters fresh from the spring. The medium is three quarters of a pint at two draughts, interposing some exercise between them. The whole to be taken before breakfast. "Sugar comfits and aromatic seeds, are frequently eaten to correct the nauseous taste of the water: but Dr. Garnett recommends a small quantity of sea-biscuit or coarse bread." *Mackenzie, p. 129.* A full course of the water requires a period of from four to six weeks. As the water may be taken to any distance, the patient may continue or resume the use of it at home, afterward.

Dr. Scudamore thinks, that the Harrogate water is, every year, gaining reputation in hepatic diseases, and intestinal torpor, in conjunction with the blue pill and *ex. col. comp.* Dr. Garnett recommends injections of the water *per anum*.



"Of cutaneous diseases, it is in the order *squamæ* of Willan, and the species *lepra* and *psoriasis*, that Harrogate water promises the most benefit. Dr. Willan gives his valuable testimony to its efficacy when he remarks, 'I have seen some very obstinate cases of *lepra*, *alphos*, and *psoriasis*, completely cured by the proper use of the waters of Harrogate.'" *Scudamore*, 105.

Dr. S. does not think the water is likely to prove very successful in the different kinds of *acne*, while in the species *rosacea*, or *gutta rosea* of authors, it is apt to prove decidedly hurtful. Dr. Armstrong, in his valuable work on Scarlet Fever, is well known to speak very highly of Harrogate water in various diseases of the skin, joints, and viscera. Dr. Scudamore thinks it would, in all probability, be very advantageous in gravel, and habitual deposition of lateritious sediment in the urine.

In respect to the Harrogate bath, Dr. Scudamore thinks, that the same general principles which regulate the use of the ordinary warm bath are applicable to it, with some additional cautions. For instance, the same preparations should be enjoined that precede the internal use of the waters; and as the bath is a considerable stimulant on the skin, it should not be taken while any feverishness obtains in the system. Dr. Garnett thought, that the water was absorbed by the skin. Without fully acquiescing in this principle, Dr. Scudamore concludes, that "its strong impregnation with saline and gaseous matters, causes it to act very decidedly on the sentient surface of the body, and indirectly, by sympathy, on the internal organs." 109.

People with cutaneous complaints should use the bath shortly before going to bed, and drink some warm diluting fluid afterward. In other disorders, the bath may be taken an hour or two before dinner. The stay in the bath will vary from ten minutes to twenty-five. The bath is to be considered as an auxiliary remedy in those diseases where the water is taken internally. It is calculated to afford considerable relief in the *sæquelæ* of gout and rheumatism; but is inadmissible when decided gouty action, or rheumatic inflammation is present.

ODDY'S SALINE CHALYBEATE SPRING is of considerable importance. It contains magnesia, lime, and iron, combined with muriatic, sulphuric, and carbonic acids. The solid contents in a wine gallon are, 300 grains of muriate of soda—22 of muriate of lime—9 of muriate of magnesia—6.7 of carbonate of lime—1.86 of sulphate of lime—2.40 of oxide of iron.

The properties of this spring are alterative and tonic in
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a high degree. It appears to Dr. Scudamore to be a water possessing "an excellent combination of saline ingredients, and of oxide of iron, held in solution by carbonic acid." 120. Our author offers the same general rules for the exhibition of this water as for that of Tunbridge Wells.

Close to the above spring is another, and simply chalybeate water. Of this we gave an account in the 8th No. for April, 1820, p. 650. Dr. Scudamore doubts the correctness of Dr. Adam Hunter's statement, that this spring contains ten grains of carbonate of iron in the gallon. He makes it only one grain and a half. But Doctors will differ on more subjects than those of mineral waters.

Harrogate and its vicinity can boast of much interesting scenery, and the air is bracing to the invalid whose case may require "sulphuretted and chalybeate springs of superior pretensions."

§ V. BATH. The mineral springs of this celebrated place are the only ones we possess, which may be called hot to the touch. They appear to be all derived from the same source, varying in their temperatures, in consequence of their course to the surface being more or less circuitous. Their chymical impregnations vary only in degree. The King's Bath water yielded the following saline contents, according to the analysis of Dr. Scudamore and Mr. Garden. In a pint of the liquid were found 1.2 grs. of muriate of lime—1.6 ditto muriate of magnesia—9.5 ditto sulphate of lime—.9 ditto sulphate of soda—.01985 ditto oxide of iron—1.2 cubic inches of carbonic acid.

Our author thinks, that the magnesia in these waters (which he has discovered) is one of their most important ingredients. The King's Bath water is more strongly impregnated with magnesia than the Cross Bath, but not quite so much so as the Hot Bath. The following remarks are in reference to the King's Bath Pump. In judging of the medicinal properties of this water from Mr. Phillips's analysis, by the direct mode, one would be led to attribute very little influence to it, excepting as a slight chalybeate:—

"But upon Dr. Murray's views, the water will acquire higher pretensions. In his calculation, he gave to a pint of the water 3.1 gr. of muriate of lime,* and raised the proportion of sulphate of soda from 1.5 gr. to 5.5 gr." 141.

* Dr. Murray did not know the existence of magnesia in the water. If the whole of the muriatic acid were supposed to be combined with lime, the muriate of lime would be almost accurately 3.1 grs.; according to my present analysis."



Dr. Murray exaggerates the efficacy of the muriate of lime, and was ignorant of the existence of magnesia in the waters. The quantity of iron is so small, that unless we view it as a protoxide held in solution by carbonic acid, we cannot easily account for its effects on the human body. Here our author, as indeed in most other parts of the volume, offers an epitome of what others have written on the subject of Bath waters, with such comments of his own as his limited experience and general reasonings enable him to make. Dr. Falconer recommends these waters in cases of deficient nervous energy, usually styled cachectic, as chlorosis, visceral obstructions, "that hardness about the region of the liver and spleen which often succeeds to intermittent fevers," &c.

"Sir G. S. Gibbes advises the use of the water in that condition of the liver in which its functions are remarkably inert from obstruction, unattended with any inflammatory action, and when the stomach is affected with dyspeptic symptoms, dependent upon general want of tone in the digestive organs. A degree of jaundice attends this state of disorder, and the stimulus of the water has the praise, from these authors, of exciting healthy action in these important viscera, in a remarkable manner." 147.

Dr. Scudamore very properly questions the propriety of employing the Bath water in visceral obstructions, since it is difficult to imagine obstruction in an organ, independent of some degree of inflammation or congestion, when the stimulant effects of these waters would be injurious.

"I would say for the most part, the Bath water should not be employed in complaints of the abdominal viscera, while any absolute obstruction is actually existing. As a tonic remedy, after the sufficient employment of regular medicines, it is entitled to our best confidence. It is always to be considered in diseases of obstruction, that if we stimulate the organs of circulation prematurely, it is more probable that we shall excite diseased than healthy action. It must be our object to restore proper function before we can, with any fair prospect of advantage, excite the unhealthy organ or organs, to a greater degree of action;—if action alone can be considered." 148.

In *paralytic* affections, it is obvious, that great care is necessary in prescribing these waters, now that the pathology of palsy is better understood than formerly. In dyspepsia resulting from studious and sedentary habits, these waters, Dr. S. thinks, may be very generally applicable. In respect to gout, a subject on which our author will be listened to with attention, these are his sentiments.

"I speak from sufficient experience in saying that the Bath water, either employed internally or externally, is inadmissible, when an active state of gouty diathesis is present; when the tendency to

relapse is strongly established in the constitution, whether from the use of Eau Medicinale, Wilson's Tincture, Reynolds's Specific, or similar baneful medicines; or from continued irregularities in living. Also, when plethora; a state of circulation easily excited to inflammatory action; or marked obstruction in the vessels of the liver, are found to exist. As a general opinion, I would venture to observe that a gouty patient should be restricted to any free use of the water, and perhaps to its employment altogether, unless debility of the stomach, or nervous system, unattended by gout, prevail; or unless that kind of chronic gout is happening in which it is to be desired that a fit, as it is called, should be excited for the relief of the constitution, which, under such circumstances, is oppressed with all the distressing symptoms of hypochondriasis. I must add, however, that cases of this description must be attentively studied, as to the question of visceral obstruction." 151.

Dr. S. suggests, when the Bath water is found too stimulant, to convert it into an alterant by exposing it for a few hours to the open air, and afterward warming it to any required temperature, in which case it will have lost its oxide of iron, and some of the carbonate of lime, retaining the muriates in full proportion, "on which so much of its virtues may be stated to depend." The *medicinal* virtues of these waters, internally and externally applied, are principally taken from Dr. Falconer and other preceding writers, consequently we cannot dwell upon them here. Dr. Scudamore thinks that it is in the chronic forms of gout, where there is great deficiency of nervous energy in the muscles, joined with languid circulation in the extremities, and stiffness with aching pains in the joints upon every motion, that we are to expect most advantage from the Bath waters, internally and externally. The dry pumping, he thinks, should be cautiously employed, and never when there is any tendency to inflammatory action in the parts. In chronic rheumatism the baths are highly useful, though not a remedy of universal application in this complaint. It will be found most efficacious in those forms where the inflammatory diathesis is absent, and in which there is but little tendency to febrile irritation. But in gout and rheumatism Dr. Scudamore does not "lose sight of the superior pretensions of the Buxton bath for most conditions of these complaints."

"Bath, I apprehend, deserves the preference only in that state of the limbs, in which the circulation is very languid, as shown by coldness of the extremities; and remarkable stiffness constantly prevails." 169.

§ VI. CHELTENHAM. It is to be regretted, that some of the medical gentlemen now, and long resident at Cheltenham.

should not have favoured their brethren with some account of these celebrated waters, and the diseases to which they are peculiarly applicable. It cannot be expected that a rapid visit, or a short sojourn at such a place, can be productive of much information. Into the minute details of analysis, partly original, partly compiled, which Dr. Scudamore has presented, we cannot enter here. "It is evident," says Dr. S. "from the comparative view of these analyses, that the waters in the course of the last few years, have undergone considerable changes." Thus the spring No. 1, now scarcely contains any chalybeate impregnation—while the spring No. 2, which, in 1817, was said to be more strongly impregnated than the powerful water of Harrogate, produces only a white precipitate with the acetate of lead.

"I am compelled therefore to give the following character of these waters. No. 1, a saline aperient alterative water, containing a very slight impregnation of iron, so as not to be objectionable on this account, except with a patient to whom this ingredient is forbidden even in small quantity.

"No. 2, of much the same power as No. 1, except that it has less of the muriates of soda and magnesia. It does not appear to be more strongly chalybeate than No. 1.

"No. 3, equally aperient with No. 2; has less of muriate of lime, and more of muriate of magnesia.

"No. 4 is a saline water, which appears to be wholly free from iron, but contains a good proportion of all the saline ingredients.

"No. 5 is a water not showing any sulphuretted impregnation. It is only slightly chalybeate. It possesses a fuller impregnation both of aperient salt, and of the most important muriates, than the other waters.

"No. 6 contains only a minute proportion of iron. It is less aperient than No. 4, but contains rather more muriate of magnesia." 188.

In taking a general review of the composition of all these waters, Dr. S. finds that there are three kinds, all saline, aperient, and alterative; some containing a very feeble sulphuretted impregnation; others a small portion of oxide of iron held in solution by carbonic acid. The aperient agent is sulphate of soda—the alterative, the muriates of lime and magnesia. It is the practice to increase the purgative power of Thompson's No. 4, by the addition of a solution of the salts obtained by evaporation of the water.

We shall not dip into the dispute between Dr. Adam Neale and the proprietors of certain springs at Cheltenham, but proceed to the *medical history* of the waters, though we can expect but very limited observations from the work under review. Dr. Scudamore thinks, and no doubt with justice,

that the important and salutary effects of the Cheltenham waters consist in this :—

“That an invalid can pursue a continued daily course, such as produces a regular and considerable action on the bowels, without suffering that debility of the constitution and impaired appetite, which are apt to occur from a similar course of saline aperients at home.” 200.

A course of Cheltenham waters should not be entered upon without medical advice.

“As a general rule, a mercurial purgative should precede the use of the water. It is an important fact, that if much confinement of the bowels have prevailed, and more especially if there be decided biliary obstruction, the water, instead of becoming the ready remedy which is expected, may prove a source of evil in the way I shall state. It may act upon the exhalent vessels of the alimentary canal, so as to produce only fluid discharge, and actually leave behind the more solid and obstructing matter. The same observation applies in a great degree to the use of the water in progress. It is, I know, the medical practice at Cheltenham, and very judiciously, to conjoin the use of a purgative alterative pill with the water. This will of course be more or less active in its composition, according to the constitution of the patient and the nature of the case.” 201.

Dr. Scudamore shortly enumerates the principal diseases to which these waters are applicable. “The gouty patient may drink the pure saline waters, with almost certain prospect of advantage.” A paroxysm of the disease very commonly occurs in a short time after commencing the waters—resulting, Dr. S. thinks, “from the stimulating qualities of the muriates.” In such circumstances the Doctor advises a discontinuance of the waters, during the active symptoms of gout. The fit, he thinks, does not very soon return, after an accession of this kind, provided the case has been properly managed.

The disordered condition of the digestive organs produced by residence in tropical and other fervid climes, “rank foremost in the class of Cheltenham cases.”

“It is an encouraging consideration, for those who labour under disordered functions of the liver, together with debility of the constitution, that the action of the Cheltenham water on the bowels, from day to day, is not attended with the weakening effect which is liable to happen from ordinary medicine; and as the individual who has resided in a tropical climate, most usually has undermined the real powers of his constitution, this is a point of great moment.

“Every practitioner must have met with cases of diseased liver, accompanied with such an impaired state of constitution, that any active employment of mercury would be an unwise if not a hazard-

ous treatment. It is not safe to raise up mercurial fever in the system in these instances; and I do not believe that a better expedient can be adopted, than a course of Cheltenham saline water in conjunction with a mild mercurial alterative." 205.

As an auxiliary, the warm bath, upon a regulated plan, will materially assist the alterative action of the water. With which view the patient should bathe an hour or two before dinner, and not take any unnecessary exercise afterward. We do not think that in any medical work, not destined exclusively for the non-medical reader, such details as the following can have a very pleasing effect on the professional mind.

"As a general rule, I should class in the prohibited list, salt meat, pork, fat and skin of meat, rich made dishes, the fat part of salmon, stewed eels, lobsters, pickles, and salads; spinage, as being a vegetable which readily ferments; any vegetable which is not quite in season, sweet, tender, and well boiled; pie crust, and all rich confectionary: strong cheese, and such as is either very new or very old." 208.

§ VII. LEAMINGTON, situated two miles East of Warwick, and 90 miles from London, formerly an obscure hamlet, now assumes, every day, more and more the pride and magnificence of a modern town. The surrounding country is agreeable, and affords the invalids great variety and facility of exercise.

"Interesting objects of curiosity in the neighbourhood are not wanting. That ancient and most noble structure, Warwick Castle; the romantic attraction of Guy's Cliffe; the venerable ruins of Kenilworth Castle; Stratford-upon-Avon, at an accessible distance, the well-known birthplace of our divine Shakspeare, may be mentioned as assurances to the visiter, that in pursuing his daily exercise he will find an ample share of gratification." 215.

Our author gives analyses of nine different, or at least distinct springs at this place, for which details we must refer the curious to the work itself. We can only glance at the prominent chymical and medicinal properties of a few of them.

I. *Royal Pump Room*.—Saline water. This has only a small trace of iron, and therefore may be considered as an almost purely saline water, strongly alterative and considerably aperient. It contains much muriate of lime. In general, the action of the water on the bowels ought to be assisted by pills taken on the preceding night.

II. *Royal Pump Room*.—Sulphur water. This is an excellent alterative water, mildly aperient, containing very good proportions of muriates of lime and magnesia, and an

active impregnation with sulphuretted hydrogen. The oxide of iron is very trifling, yet sufficient to increase the stimulant property of the water. It does not keep like the Harrogate water, but loses all its sulphuretted hydrogen.

III. *Lord Aylesford's Springs*. This water is considerably aperient and alterative, abounding in muriate of lime, and containing very little iron.

IV. *Marble Bath Pump*—right urn. Nearly resembles Harrogate waters in its impregnation with sulphuretted hydrogen, and, in its saline contents, is a stronger water than that at the royal pump room. The *left urn* is a very strong chalybeate alterative.

"The waters of Leamington, as compared with those of Cheltenham, are, according to my view of their comparative composition, considerably different in their medicinal character. The saline class are much more highly impregnated with muriate of lime; the sulphuretted in the one instance powerful, and the other almost negative; the chalybeate of very superior activity. But it does not follow that the invalid should, from this statement, give a necessary preference to the springs of Leamington. On the contrary, in all these cases in which the most saline, or, in familiar language, the most cooling aperient waters are required, Cheltenham will deserve the preference. In general terms, I am disposed to consider that the use of the waters of Cheltenham should sometimes be introductory to those of Leamington; as being less stimulating." 234.

§ VII. *Malvern Waters*. The village of Malvern is situated eight miles from Worcester, and its waters are celebrated for their purity. Dr. Scudamore having very little experience of these waters himself, gives the description of them from Dr. Saunders's treatise. He is not inclined to attribute to waters of so remarkably slight impregnation, those varied virtues portrayed by Dr. Saunders.

"This is certain.—The salubrious air of Malvern, and the peaceful feelings which the quiet and charming retirement of the spot inspires, contribute in the greatest degree to strengthen the body; to calm the mind, and thus to promote the general health. It is from such a conviction, that I have advised the Cheltenham invalid to repair to this favoured situation, at a certain period after the use of the aperient alterative waters."* 245.

* Dr. Scudamore, in alluding to Dr. Philip's analysis of these waters, observes that he could not detect iron in them, and that he found the water of Holy Well and that of St. Ann's "precisely similar." Dr. Philip has recently replied to this observation in the *London Medical Repository* for December, showing that his analysis was made with the greatest care by "repeated distillations of a gallon of each of the water-

It only remains for us to notice the "aluminous chalybeate spring" in the Isle of Wight, the account of which is entirely taken from Drs. Marcet and Lempriere, whose writings on the subject have been long before the public. Upon Dr. Murray's principles of analysis this spring would appear to contain, in each pint, 41 grains of sulphate of iron—31 of sulphate of alumina—7 of sulphate of lime—2 of muriate of lime—1 of muriate of magnesia—22 of sulphate of soda. From this view, the water must possess great medicinal powers—the sulphate of iron being (next to the muriate) the strongest of the salts of that metal. The muriate of lime is in efficacious quantity; while the sulphate of soda will tend to obviate the restraining action of the water on the bowels. We shall terminate this article with an extract from Dr. Lempriere's work.

"In administering the water, it was a rule, previously to devote one day to clearing the bowels by a suitable aperient; and the sulphate of magnesia, or Epsom salts, was the medicine generally preferred. Under this preparation, the water seldom produced any disagreeable effect on the stomach or bowels, or rendered it necessary, during the course, to take laxative medicines; an advantage which does not attach to the other chalybeate waters, unless they hold in solution a considerable portion of some aperient salt.

"From the active substances contained in the aluminous chalybeate water, Dr. Saunders, as well as Dr. Marcet, have very judiciously recommended, that, in the first instance, it be diluted. To patients with delicate stomachs, or in irritable habits, this precaution, as well as that of taking off the chill by immersing the glass in warm water, seems advisable; but in the Walcheren cases, the only qualification the water received, was the addition of a drachm, or tea-spoonful of the compound tincture of cardamoms, to each dose, which at first was only two ounces, or a small wine glass full; and this was repeated three times a day, giving the water at those periods which would the least interfere with the hours of meal. When first prescribed, it was thought advisable that it should not be taken in the morning fasting; but in this, as well as in many other particulars, the practitioner must act as circumstances shall suggest, bearing in recollection, that tonic medicines, in general, produce the greatest effect upon an empty stomach.

in closed glass vessels, and without allowing the water to boil;" having found, from several trials, that such a proportion of the solid contents as considerably influences the result, where the whole quantity is so small, as in the Malvern waters, passes over when the distillation is performed by boiling. He thinks it needless to state that it was impossible for him, on comparing two powders, to mistake a whole for a half—"for the solid residuum of St. Ann's water was never more than about one half of that of the Holy Well water." *Vide Med. Repos. ut supra.*

"In about three days, the dose of the water was increased to three ounces, or a larger wine glass full, with the same proportion of tincture of cardamoms, three times a day; and at intervals, it was thus gradually augmented, until a pint, in four doses, could be taken in the twenty-four hours, though, in most instances, twelve ounces, or three quarters of a pint, were found sufficient.

"The water, no doubt, might occasionally be given without the tincture of cardamoms or any other addition; but independently of the risk which would thereby be incurred of nauseating the stomach, it seems to have derived considerable efficacy from being combined with an aromatic; in the choice of which, the practitioner must be regulated by the habits and constitution of the patient, as well as by the particular case thus brought under his consideration.

"In a course of this water, costiveness, which, with me, the remedy seldom induced, is *most particularly* to be guarded against, by the occasional use of a suitable aperient, of which the sulphate of magnesia, or the aloetic pill with myrrh, was generally preferred; and a laxity of the bowels, if it extends beyond a *temporary* effect, may easily be restrained by adding to each dose a few drops of the tincture of opium, or, if further necessary, by qualifying it with some aromatic astringent." 261-3

We believe that we have now presented as faithful and concentrated an analysis of Dr. Scudamore's volume, as could well be comprised within the limits of this article. And having done so, we do not conceive that we are called upon for any opinion or comment as to its general merits, since our readers are put in possession of ample documents on which to ground their own judgment in the case.

Dr. Mackenzie's little volume, being a professed compilation, has not been brought forward analytically; and therefore, in justice to its merits, we consider ourselves bound to say, that it is a very useful little work, embracing much interesting information in a narrow compass.

VI.

Medical Transactions, published by the College of Physicians in London. Volume the Sixth. 1820.

(Continued from No. III. p. 408.)

In our last Number we gave a full analytical view of the first eight articles in this important volume. Eight more remain to be reviewed, occupying 230 pages of letter-press, and containing a great mass of highly valuable matter. Our analysis, therefore, on the present, and all other similar occasions, must expand in proportion to its freight—and not, like the bed of Procrustes, stretch or restringe it to its own arbitrary dimensions.

ART IX. *Some Observations on the Nature and Treatment of the Calculous Diathesis.* By WILSON PHILIP, M.D. F.R.S. (Ed.) &c. *Communicated by Dr. Baillie.*

CALCULOUS complaints have, of late years, much occupied the attention of physicians, surgeons, physiologists, and chymists. Exclusive *chymical* doctrines and treatment, will not, in all probability, be ever found to apply to any disease. The *chymical* and mechanical agents, in the human body, are so greatly modified and controlled by the vital powers, as to render all *chymical* and mechanical explanations unsatisfactory, and the therapeutics growing out of them hazardous. The aid of *chymistry*, however, is not to be overlooked—and in the class of diseases now under consideration, that interesting branch of science has contributed much to the success of the physician. We agree with Dr. Philip, that Magendie's hypothesis respecting the calculous diathesis is far too *chymical*. Because azote enters into the composition of lithic acid—because those who swallow much animal food and fermented liquors are liable to calculous disorders—and because animals confined to food containing *no azote*, (and thus having their health and secretions deranged) produced *no lithic acid*, M. Magendie infers that the secretion of this acid depends on the azote received in alimentary substances. Nothing can be more fallacious than such forced experiments; since numerous circumstances must influence the state of the urine, besides the quantity of azote in the ingesta, as Dr. Philip justly observes.

As calculous concretions almost always consist of uric acid in the commencement of the disease, it is Dr. Philip's object, in the present inquiry, to ascertain, as far as possible, "the circumstances which lead to produce a deposition of this acid in the urinary passages." For this purpose he instituted a series of experiments, twenty-three of which are substantially, though not minutely detailed, and some of which we shall here rapidly glance at.

In the *first* experiment, a young man, in good health, and living on *vegeto-animal* food, deposited daily from his urine about a grain and a half of lithic acid. But when the addition of three lemons daily was made to the same diet, and under exactly the same circumstances, the amount of uric acid deposition was three grains and a half. The second and third experiments have much the same tendency.

In the fourth experiment, a young man lived wholly on animal food and bread with water, for two days. At the end of this time depositions of the phosphats, but not of

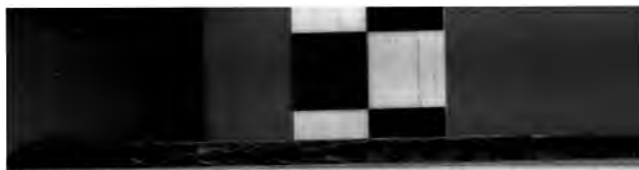
lithic acid, were found in different portions of urine set apart on the second day.

After two days' usual mode of living, he ate a lemon on the evening of the latter. On the following day he lived entirely on vegetable substances, except a little broth at dinner, eating this day two lemons. The next day same diet, with three lemons. The urine now deposited lithic acid.

These, and some other experiments of a similar kind, prove, Dr. Philip thinks, that considerable and even slight changes in diet influence the state of the urine. It appears also from our author's experiments, "that acid and acescent ingesta promote the deposition of lithic acid from the urine, while an opposite diet prevents it, and tends to produce that of the phosphats." But this rule does not hold good always, as the 8th and 9th experiments of Dr. P. show. In the *first* and *fourth* days of the 8th experiment, the quantity of lithic acid was the same, although in the former (1st day) the diet had been wholly of a very acescent nature, consisting of bread, milk, honey, sour cream, and sugar; while in the *latter* (4th day) it was composed of a large proportion of animal food. The 10th experiment shows that the diet may be of the most acescent kind, and even a large quantity of acid taken, without occasioning any deposition of lithic acid. It is also remarkable in this case, that, contrary to Magendie's theory, the increased perspiration, as well as several other causes, lessening the urine, tended to increase the deposition of lithic acid. Still, however, it is true, that, *ceteris paribus*, the less liable is lithic acid to be deposited, the greater the quantity of water in which it is dissolved. Several experiments are related in which the sensible and insensible perspiration was augmented by medicines, in all which cases the urine deposited the phosphats, but little or none of the lithic acid.

"The following difference in the effects of tartrite of antimony and compound powder of ipecacuanha deserves to be noticed. The effect of the latter on the urine is transitory, apparently ceasing as soon as the sweat ceases to flow. That of the former may generally in a greater or less degree, be perceived for several days after it is taken, during which it still seems to lessen the tendency of the urine to deposit lithic acid. I have also repeatedly observed, that the deposition of lithic acid was not so effectually prevented by tartrite of antimony, when it produced nausea, as when no sensible effect was experienced from it, a fact which we shall find explicable on principles we shall presently have occasion to consider." 202.

Dr. Philip observes that we are acquainted with few medicines which more powerfully promote the secretions than mercury; and he has had several opportunities of observing



its effects on the urine. The 10th experiment is illustrative of some of these effects. The urine of a young man (a pint in quantity) was ascertained to deposit four grains of lithic acid in the twenty-four hours, without any of the phosphats. He now began to rub in a drachm of strong mercurial ointment daily. In a few days the quantity of urine was reduced to one-half, and deposited no lithic acid, but a copious sediment of the phosphats. In a fortnight the mercury began to disorder the stomach and general system—now his urine became more copious, and again deposited lithic acid, without phosphats. Dr. P. considers that the diaphoretic action of the mercury, in the first instance, diminished the urine, and prevented the deposition of lithic acid; but that when the stomach became disordered, the skin, from its well-known sympathy with that organ, became less active, hence the increased flow of urine, and the changes in its depositions. These effects our author has observed more than once.

Experiments XXI-II are brought forward to show the effects of *indolence*, in increasing the deposition of lithic acid from the urine.

So far back as the year 1786, Mr. Forbes, in a pamphlet on Gravel and Gout, stated that the addition of any acid, even the carbonic, to urine, occasions a deposition of lithic acid. Dr. Philip repeated this experiment with sulphuric, nitrous, muriatic, citric, and carbonic acids, and always found the result as stated by Mr. Forbes. Dr. P. also found that the addition of an acid prevented the deposition of sediments since discovered to be certain phosphats of the urine. The resumé of our author's experiments may be stated thus:—

“ 1. That acid and acescent ingesta tend to increase the deposition of lithic acid from the urine, and to prevent that of the phosphats.

“ 2. That a diet, composed of a large proportion of animal food, tends to lessen the deposition of lithic acid, and to increase that of the phosphats.

“ 3. That every thing, which promotes the action of the skin, tends to prevent the deposition of lithic acid, and to occasion that of the phosphats.

“ 4. That dyspepsia tends to increase the deposition of lithic acid, and to lessen that of the phosphats, both by producing acidity of the *primæ viæ*, and by rendering the skin inactive.

“ 5. That indolence has the same tendency, both by inducing dyspepsia, and by lessening the activity of the skin in proportion as it impairs the vigour of the circulation.

“ 6. That an acid passes by insensible as well as sensible perspiration.”

It appears. Dr. Philip observes, from the foregoing ex-

periments, that, however much an acid may prevail in the *primæ viæ*, if the perspiration be free, the deposition of lithic acid is prevented, and a tendency to that of the phosphats produced. "From these facts the inference appears to be unavoidable, that more or less of the acid which, when perspiration is languid, passes by the kidneys, occasioning a deposition of lithic acid, and preventing that of the phosphats, is, when the action of the skin is vigorous, thrown off by this organ." Our author has often observed, that it is more effectually thrown off by augmenting the insensible than sensible perspiration—in the former case, he thinks, and with reason, the skin is more active, in the latter more relaxed. Similar observations apply to the kidneys. Dr. P. has reason to believe, that more acid is passed both by the kidneys and skin in the day than in the night. "Even the debilitating effects of nausea seem to lessen the power of the skin to throw off this acid." We may thus, he continues, see how causes, debilitating the digestive organs, may at length give such a disposition to the precipitation of lithic acid from the urine, that this shall take place before it leaves the pelvis of the kidney. The result of Dr. Philip's experiments leave no reason to believe that more lithic acid passes by the kidneys, when we use an *acescent* than a contrary diet. It only appears that in the former case, more than usual of some other acid, capable of precipitating the lithic acid, passes by the urinary apparatus. "Nor have we any reason to believe, when we see the precipitation of lithic acid prevented by diaphoretics, that this acid is thrown off by the skin. We still find it precipitated from the urine on the addition of any *other* acid. But here the diaphoretic has excited the skin to throw off the acid which would otherwise have passed by the kidneys, and occasioned its precipitation." If these views be correct, M. Magendie has greatly erred "in directing his attention chiefly to the constituent parts of the lithic acid, and proposing to prevent its formation by preventing the reception into the system of *one* of those parts." It is not the existence of lithic acid in the urine, but its precipitation, that we are called upon to guard against.

The success of the preventive treatment, founded on these principles, is a strong confirmation of their correctness. Dr. Philip has long employed this plan, and, in almost every instance where no concretion had actually taken place, the recurrence of gravel was prevented while the patient conformed to it.

"It consists in such an attention to diet, exercise, and a free action of the bowels, as tend to remove and prevent dyspepsia, and to support a due action of the skin, with the use of antacids, of which I have found soap the most effectual." P. 220.

Notwithstanding the disadvantages adverted to by Dr. Marcet respecting the over-use of magnesia, Dr. Philip thinks that, as a preventive of gravel, magnesia, both by correcting acidity in the *primæ viæ*, and forming a mild cathartic salt there, is a very useful article. Magnesian concretions in the intestines may be obviated by mixing with it a small proportion of finely powdered rhubarb, the taste of which may be concealed by some aromatic.

"It is, I conceive, by removing acid from the *primæ viæ*, relieving the digestive organs from a load, and rousing them to better action, that *cathartics* are often of great use in obviating the tendency to gravel." 223.

Many of M. Magendie's own observations, indeed, show that dyspepsia is the cause of gravel, and that the means which remove this are the best lithontriptics—at least the best means of avoiding stone. Dr. P. having made many ingenious remarks on Magendie's doctrines, concludes thus:—

"Upon the whole, reviewing all that has been laid before the reader, I cannot help thinking that we have reason to believe, that gravel generally originates in a precipitation of lithic acid in the kidneys, in consequence of a greater than usual quantity of another acid, generated chiefly in the *primæ viæ*, passing by these organs; and that the best plan of prevention is to correct the tendency in the *primæ viæ* to form this acid; to support, by means which invigorate the powers of circulation, the action of the skin, by which in health any superabundance of acid is thrown off; and, when we find that notwithstanding such measures, too much acid still passes by the kidneys, to correct it by antacids before it enters the circulating fluids." 229.

This paper of Dr. Philip's is distinguished by ingenious reasoning and sound principles of practice.

X. *A Contribution towards solving the disputed Question "what is the Nature of the Process called the Spontaneous Evolution of the Fetus?"* By ROBERT GOOCH, M.D. Physician to the Westminster and to the London Lying-in Hospitals, &c.

As an ounce of judgment is worth a pound of learning, so a single fact is worth a dozen of arguments. Without noticing the various disputes respecting the *quomodo* in this very curious Evolution of Nature, we shall proceed to state the case which gave origin to the paper under review.

On Sunday morning, the 24th October, 1819, Dr. Gooch was summoned to a woman, attended by one of the midwives

belonging to the Westminster Hospital, and who was in labour with her first child. The midwife reported, that when the membranes had broken, that morning at 4 o'clock, the orifice of the uterus was found somewhat open, but no part of the child could be felt. At length the pains became stronger, and the arm descended, when Dr. Gooch was summoned. When Dr. G. arrived, the arm had not only protruded its whole length, but the shoulder had turned forward under the arch of the pubis, like the occiput just before the head is born. Dr. G. also perceived, that at each pain, the side of the child's thorax was pressed down with great force against the perinæum. The arm, instead of receding, was protruded still farther, and advanced so rapidly, that in two pains, with a good deal of muscular exertion on the part of the mother, the side of the chest, of the abdomen, and of the breech, passed, one after the other, in an enormous sweep over the perinæum, till the nates and legs were completely expelled. The head and other arm were now extricated with the greatest ease. The child had been dead for a day or two before. It was of the full size, and the pelvis of the mother was not particularly capacious. The child being dead, our author thinks, is more favourable to spontaneous evolution, than when it is living. Some positions, too, he thinks, facilitate this process.

"The *most favourable* would be that in which the shoulder is to the arch of the pubis, the head towards the front, and the nates towards the back of the uterus. The *least favourable* would be that in which the shoulder is to the sacrum, the head towards the back, and the nates towards the front of the pelvis."

We have seen only one instance of spontaneous evolution of the fœtus, in the practice of a country surgeon, and where two practitioners had tried, without success, to turn. The arm and shoulder had protruded. We were not present at the moment of expulsion, and therefore cannot say whether the arm receded before the evolution of the breech; but, the mother died in 12 hours after this dreadful effort.

"If the arm and shoulder," says our author, "protrude far, the pains are strong, and the thorax presses hard on the perinæum, it will be right to wait and watch for a little time; beyond this, whoever suffers a knowledge of this rare fact to discourage him from turning in arm presentations, would be guilty, I think, of criminal irresolution." 247.

This paper is very creditable to its able author.

XI. *On the employment of Venesection in Cases of sudden seizures, commonly called Fits.* By JOHN LATHAM, M. D.
F. R. S. President of the Royal College of Physicians,
&c.

In several of our late numbers, we have stated our fears, that ultra-phlebotomy would bring a useful and efficacious measure into disrepute. We have, also, repeatedly exhorted our brethren to practise *local* detractions of blood oftener, and *general* sangui-mission seldomer, than they do. Without going the length which Dr. Latham has here done, in urging objections to blood-letting, on several occasions, we think that his observations are entitled to attentive consideration, and may serve to prevent the improper effusion of human blood, while they are not, we believe, meant to restrain the active employment of the lancet, when the circumstances justly demand the depletory treatment.

Dr. Latham instances hysteria and epilepsy, where the contortions of the patients generally prevent venesection, as doing well enough without it. In cases of syncope, from all the various causes, "the same indiscriminate practice is too often pursued;" and the consequences, in debilitated habits, are often distressing.*

"In apoplexy, although it must be confessed, that blood-letting is seldom so injurious as in those other cases to which I have been alluding, yet, even here, the practice is by much too indiscriminate, and requires, in my judgment, more consideration than is usually bestowed upon it. It certainly ought to make some difference in our practice, whether the patient be of very full or of very slender habit, although the custom of bleeding is religiously observed equally in both, and a fancied *threadiness* or *sharpness* in the pulse is usually considered as a sufficient justification for the immediate loss of blood, notwithstanding the sallowness of complexion, and the flaccidity of muscle may indicate any thing rather than plethora. The lancet however has generally been employed, without any regard either to such circumstances or even to the age of the patient, long before the physician has arrived, and the temporary relief which has been obtained, (for some benefit is commonly experienced in the first instance) is used as an argument for the repetition of the operation, and it is well if by talking about *local* fulness and *op-*

* It must be confessed that the moderns might plead the precept of the ancients, in the sweeping maxim of bleeding every one who falls down in a fit. Celsus seems to except from blood-letting only those cases where convulsions attend. "Ubi concidit aliquis, si nulla nervorum distentio accessit, utique sanguis mitti debet." *Lib. III.* We do not hold this forth as an excuse for indiscriminate blood-letting; but to show that, in all ages, men were prone to *routinism*.

pression of the brain he can carry the point so far as to satisfy the bystanders that by leeches to the temples, or by cupping glasses to the neck, a sufficient quantity of blood may be taken more immediately from the neighbourhood of the affected part, than by any depletion from the more general circulation." 252.

Dr. Latham observes, that if a patient of corpulent habit, firm muscles, florid complexion, and a full feeder, be suddenly seized with a fit, corresponding to the usual definition of apoplexy, there can be no question, that large and immediate bleeding from the arm, temporal artery, or jugular vein, together with leeching, cupping, blistering, and other depletory means, would be proper.

"But, in systems directly the reverse, in constitutions flaccid and emaciated, it is surely contrary to sound discretion, that a similar mode of treatment should be instituted. It may be, indeed, from oppression on the brain, that the sudden apoplexy has supervened; but we should recollect that congestions may, also, sometimes arise from the *slowness* of the stream, and from the weakness of the impelling force. We should take the trouble of inquiring into the patient's constitution before we proceed to an operation, which, if misapplied, is fatal." 254.

Dr. Latham does not presume to lay down rules that can be applicable to every apoplectic case—"since circumstances must vary and determine the practice in almost every instance." But he thinks that, speaking generally, practitioners called to persons in what are termed fits, should be cautious of the lancet when "the patient is emaciated and the muscles flaccid."

From what has been said, Dr. Latham hopes not to be understood as meaning that, while he condemns indiscriminate bleeding, he is desirous that the physician should stand by and do nothing in such cases. Congestions may exist in the intestinal canal, causing pressure on the larger blood-vessels, and thus producing irregular accumulations of blood in different parts of the system—especially in the head, with all the symptoms of apoplexy. Or gaseous distention of the stomach may produce the same effect. In such circumstances, our author thinks, the prudent physician will evacuate the stomach and bowels (in cases of extreme debility) before he proceeds to empty the blood-vessels. In the mean time, he will have a fairer opportunity of judging of the case, and determining on the propriety of having recourse to local or general blood-letting.

What he has said of apoplexy, he conceives, is generally applicable to paralytic attacks. "The lancet has been employed here too, without due discrimination."



"But, indeed, in these cases, the generality of medical practitioners are not very urgent to employ the lancet, commonly contenting themselves, with what may be termed, a fair depletion by the intestinal canal after one previous bleeding, and then flying at once into the opposite extreme of stimulants and tonics :—a practice which may be characterized as too general to be never wrong, but yet too mechanical to be always proper." 261.

Dr. Latham sums up the object of these observations in the following terms :—

"That venesection is too generally employed, and the relief obtained from it, in the first instances, usually fallacious ; that flaccidity of muscles, which depends upon the inanition of the vessels which nourish them, is a better criterion of the actual state of the vascular system, than the pulsation of the artery ; and that the unequal distribution of blood, which, even in the weakest constitutions may affect the head, will, in such debilitated habits, be more safely and effectually relieved by other means of depletion, than by *general bleeding*." 262.

Taught by experience and observation, that a *routine* practice is dangerous—especially if of the *ultra* kind, we are advocates for cautious discrimination, in all doubtful cases ; while we are the steady friends of energetic practice, wherever the indications point to such measures. Under these impressions, we recommend those who look too exclusively to the vascular system, in their pathology, not to condemn the admonitions of age and experience set forth in the foregoing observations.



XII. *Observations on Puerperal Insanity.* By ROBERT GOOCH, M. D. Physician to the Westminster and City of London Lying-in Hospitals, &c.

THIS is a very ingenious and interesting paper, and one which we find extremely difficult to analyze. We must take a different course from that pursued by the very able author, in order to render the paper concise, and at the same time perspicuous.

Puerperal insanity attacks a few days, weeks, or even months, *post partum*—nay, it occurs before delivery. Its precursors are generally an increase of frequency in the pulse, sine causa evidente, restless nights, hurry and irritability of temper, wildness and incoherency of language, mania, with not seldom, an attempt at suicide. When it advances in the form of melancholia, it is more gradual, and commonly begins some months after parturition, with, first, a failure of memory, confusion of mind, irresistible and inexplicable de-

pression of spirits, mournful and downcast countenance, silence and thoughtfulness, self-aborrence—ending in insanity, which does not differ, in appearance, from the disease in other states than the puerperal. When once begun, its duration is very various—sometimes subsiding in a few days, or even hours; but commonly lasting some weeks or months. In most cases, life is not endangered, nor the intellect ultimately. No fatal case occurred in Dr. Gooch's practice, but some instances have come to his knowledge, in the practice of others. In the Salpetriere, one in fifteen have died of this disease. It is difficult, our author thinks, to distinguish puerperal insanity from phrenitis by the actual symptoms—the history of the case is the best mean of diagnosis.

In phrenetic affections after child-bearing, the patient had, in our author's experience, fever, pain, and throbbing in the head, with, at most, confusion of mind, being always able and willing to describe her feelings. "On the contrary, in mania, an irritable, incoherent mind was among the first symptoms of the disease."

The ETIOLOGY of puerperal insanity comes within a narrow compass. Almost all we know of it is—the puerperal state—but how or why, we are, as yet, ignorant.

"Yet there is another cause," says our author, "which greatly contributes to the excitement of this disease—a considerable interruption to that mental tranquillity, so requisite during the susceptibility of the puerperal state—the frequent admission of boisterous persons into the lying-in-room, an officious, eager, irritable nurse, or relative, who, with the best possible intentions, is continually doing the worst possible things—sudden and violent agitation, domestic anxieties, and misfortunes have preceded, and apparently contributed to the appearance of the disease." 281.

Still, as all these things happen repeatedly in parturition, without subsequent insanity, there must be some peculiar predisposition or susceptibility in the brain or nervous system of the individual, called into action by the foregoing exciting causes.

TREATMENT. Our very able author lays down five indications under this head.

1. *Restraint against Suicide.* This can only be properly put in force by a nurse accustomed to the insane.

2. *Removal of Irritation from the Digestive Organs.* As the tongue is usually furred, the alvine excretions unhealthy, and the disease always aggravated, by even a tendency to constipation, purgatives, that will operate copiously twice

or thrice, should be given every third day. This class of remedies is superior to every other.

3. *To watch the Circulation, especially the Vascular System of the Brain.* The most difficult question, in the treatment, is, Dr. G. thinks, when to bleed, or not to bleed? The result of our author's experience is, that when there was no evidence of determination to the head, the pulse deviating from its natural state, *only* in rapidity, (probably dependent on mental irritation) blood-letting, general or local, did *not* relieve the symptoms, while it rendered the patient less capable of enduring the exhausting influence of a protracted disease. When, however, the pulse is not only quick, but full and strong, the mental irritation is generally abated by tranquillizing the circulation. When this cannot be effected by *liberal* purging, and cold applications to the head, then a moderate loss of blood from the scalp or neck, by leeching or cupping will be proper—and still more particularly so, if determination to the head be unequivocally evinced by flushing of the face, redness of the conjunctiva, throbbing and fullness of the carotid branches. Our author, and those whose opinions he venerates, have come to the conclusion, that general blood-letting is seldom necessary or safe.

4. *To procure Sleep.* The want of sleep is one of the most distressing symptoms both in mania and melancholia. Experience has shown the inefficacy of opium, even in large doses. The most useful soporific, with which our author is acquainted, is the tepid bath at bed-time, and a night-dose of camphor and hyoscyamus, 10 grains of each. In the Quakers' Lunatic Asylum, meat suppers with porter, are often used as narcotics.

5. *Moral Management of the Mind.* During the violence of the disease, all reasoning is vain. But there is a period when an interview with relations, or such interpositions may be attended with beneficial effects. An interesting case, in elucidation, is here stated, which we shall notice in its place.

We have kept the *didactic*, or preceptive part of the paper uninterrupted by the *narrative*, or illustrative;—a plan which our ingenious author might probably have adopted with advantage. We shall now, however, sketch out some of those cases which Dr. Gooch has interwoven with the body of the paper.

The first case narrated by our author, is one of catalepsy supervening on puerperal insanity. We shall considerably abbreviate it.

Case I. A married lady, 29 years of age, much disposed to hysteria, had had several premature labours, and only one living child. In a few days after her last delivery, in the seventh month of pregnancy, she was seized with violent head and face ache, which subsided, leaving much flatulence of stomach, with quick, weak pulse, and depression of spirits, soon degenerating into unequivocal and violent insanity, during which she attempted her own life. These symptoms, in a few days, assumed quite another aspect. She was reported by her attendants to be in a trance, or dying. Her physicians found, however, that the pupil was obedient to the light. Her eyes were open; but no movement of the chest, nostril, or other indication of respiration, was perceptible. The pulse (120) and temperature, alone indicated life. We must regret that our author did not accurately ascertain whether respiration was entirely suspended in this case. That process may be carried on by the diaphragm, without any visible motion of the chest. We do not conceive that the heart would have acted long without its usual and necessary accompaniment, respiration. The lady was now raised so as that the trunk formed an obtuse angle with the limbs—and in that uncomfortable posture she continued many minutes, without support.

“One arm was now raised, then the other, and where they were left, there they remained; it was now a curious sight to see her sitting up in bed, her eyes open, staring lifelessly, her arms outstretched, yet without any visible sign of animation; she was very thin and pallid, and looked like a corpse that had been propped up, and had stiffened in this attitude.” 269.

She was now taken out of bed and set on her feet, while loud noises were made in her ears. “But she stood up as inanimate as a statue,” although the slightest touch put her off her balance.

She went into this state three several times—the first fit lasting fourteen hours—the second twelve—and the third nine hours; with intervals of one and two days. The disease now resumed the ordinary form of melancholia, and in three months she was well.

Dr. Sutherland related to the author several other cases still more extraordinary—one, in particular, of a young lady who continued cataleptic several months, and was only preserved by great vigilance and management in feeding her. Another patient, a male, being suspected of imposture, was one day placed upright, at the edge of a cold bath, and at length gently pushed in. “He fell to the bottom like a stone, and continued there without the slightest effort to save himself.” This man ultimately recovered. We certainly

should, at all times, discountenance these kinds of experiments on real or fictitious cataleptics.

The next case which we shall notice is brought forward by Dr. Gooch in illustration of the gastro-hepatic origin of the disease, and its successful treatment by purgatives.

Case II. A lady was seized with puerperal mania, a few days after the delivery of her first child, and which continued long and alarming, but at length she recovered. In her second pregnancy she was attended by Dr. Gooch, in London, and continued well for ten days, when a fire taking place in the neighbourhood, excited the disease a second time. Her nights were sleepless—pulse seldom beyond 100 and soft. “Her face was pale and sallow, and her eye yellowish, her tongue furred, and her bowels scarcely ever acted upon without medicine.” Her head was shaved and cupped, without any evident benefit. She took brisk cathartics every second or third day, and in three weeks returned to the country well.

In about a year after this, our author was summoned to attend the third parturition. When Dr. G. saw her she was within a week of her accouchement. She was jaundiced, which the surgeon informed him was the case in her *first* confinement. The tongue was furred—the stools nearly black—the urine high coloured.

“This was a state which it was desirable to correct for its own sake, but still more so when the influence which hepatic disorders have over the mind, even independent of the susceptibility of the puerperal state, was taken into the account, and it was at least a striking coincidence that her former attacks had been preceded by the same appearances. Pills were ordered, each containing one grain of calomel, and five grains of the myrrh and aloetic pill, and she was ordered to take one often enough to move the bowels three times daily. One a day was sufficient—her tongue became clean—she lost the yellowness of her eye and complexion—the stools assumed a natural appearance, and she fell in labour about nine days afterwards, with her stomach and bowels in a natural condition; her friends, and the attendants who had witnessed her former illness, were long before they lost their apprehensions; but this time she passed through her confinement without the slightest appearance of her former disease.” 287.

Dr. Gooch ingenuously confesses that this case is not likely to make so great an impression on others as on himself; and that he can excuse them for doubting whether the treatment was the cause of the escape. In the following case, however, there can be little question that the remedies employed were the cause of the striking relief experienced.

Case III. A lady, literary, talented, susceptible, was anxious to nurse her first child; but her nurse and surgeon thought she could not. Irritating discussions ensued, and puerperal mania was the result. Her skin was hot, her pulse was full, and above 100, her tongue darkly furred, her bowels confined, her stools excessively offensive and dark. A dose of calomel and jalap, with salts, procured a few evacuations, but produced little relief. She was therefore ordered still more active cathartics, which expelled a very large evacuation, nearly black, and horribly offensive.

"This was as usual discharged into the bed, without any notice on the part of the patient. It acted again an hour or two afterward; but now the nurse, who was sitting by the bed-side, was surprised to see her turn round, and in a calm and natural manner request to be taken up as her medicine was going to operate; her waistcoat was immediately loosened, and she was taken out of bed, when she voided a stool of prodigious size, as dark and offensive as the first, and then walked back to her bed calm and collected." 290.

The physicians saw her a few hours afterward lying on the sofa, perfectly tranquil, answering questions correctly, and manifesting no vestige of her former complaint, excepting some little strangeness of expression in her countenance, and a timidity in conversation. Her recovery was rapid and perfect.

The influence of the biliary organ on the mental functions was noticed by philosophers, physicians, and even poets, among the ancients; several of the moderns have also stated facts in support of this connexion. Within these few months M. Bricheteau, an able pathologist, has published a memoir on this very subject, an analysis of which will be found in another part of this journal.*

The next case which we shall abstract is one to illustrate the beneficial effect of moral emotions on the alienated mind, at a certain period of the disorder.

Case IV. A lady, ætat. 28, of susceptible mind, but good constitution, became affected with melancholia a few months after her second accouchement, owing apparently to a frightful incident that had occurred towards the end of her pregnancy. Having weaned her child, gone to the sea side, and taken some tonic medicine, without benefit, her spirits became gradually more depressed, and nothing could persuade her that she had not some fatal disease.

* Quelques considerations de physiologie pathologique sur les rapports particuliers et reciproques qui existent entre le cerveau et le foie. Par M. Bricheteau. *Journal Complementaire*, Sept. 1820.



"One day it was cancer, another, inflammation of the bowels : and to such a height did her apprehensions rise, that her husband was often brought home by some alarming message, and found her, with a solemn air, and in a low whisper, giving directions to her servants, whom she had assembled round her, what to say, if she should expire before their master arrived." 295.

It was now evident that she was deranged. She was sent into the country, under proper attendance, and separated from husband, children, and friends. For several weeks she manifested no improvement, sometimes occupied with one notion, sometimes with another. At length one predominant hallucination absorbed all the rest. She was doomed to a public and disgraceful execution for her crimes—every noise she heard was that of the workmen preparing the scaffold—every carriage was that of the officers of justice assembling at the place of execution. But the worst of all was the disgrace and death of her children and husband, whose spirit haunted her. A white post at the back of the cottage was her husband's ghost, which, day and night, was whistling in her ears. Several weeks passed this way ; but her husband, at length, determined on an interview. The scene which passed at this interview we shall give in the words of the husband.

"As soon as I entered the drawing room, she ran into a corner, hid her face with an handkerchief, then turned round, looked me in the face, one moment appearing delighted at the thought that I was alive, but immediately afterward assuming a hideous expression of countenance, and screaming out that I was dead and come to haunt her.

"Finding that persuasion and argument only irritated and confirmed her in her belief, I desisted, and tried to draw off her attention to other subjects ; it was some time since she had seen either me or her children ; I put her arm under mine, took her into the garden, and began to relate what had occurred to me and them since we parted ; this excited her attention, she soon became interested, and I entered with the utmost minuteness and circumstantiality into the affairs of the nursery, her home, and her friends. I now felt that I was gaining ground, and when I thought I had complete possession of her mind, I ventured to ask her, in a joking manner, whether I was not very communicative for a ghost ; she laughed ; I immediately drew her from the subject, and again engaged her attention with her children and friends. The plan succeeded beyond my hope ; I dined, spent the evening with her, and left her at night perfectly herself again." 300.

She had no relapse. Dr. Gooch does not mean to draw the conclusion from this case that violent mania is curable by conversation, but that there is a stage approaching convalescence, in which the bodily disease is loosening its hold

over the mental faculties, and in which the latter are capable of being drawn out of the former by judicious appeals to the mind.

The remainder of Dr. Gooch's paper is taken up with an inquiry into "the grounds of the *prevailing doctrine* that mental derangement is a moral disease." We certainly were a little surprised to find Dr. Gooch stating the above to be a *prevailing doctrine*; for we believe that hardly a *pathologist* of the present day entertains any such opinion. This the readers of this journal need not be told; since hardly a number has issued from the press, without containing the sentiments of enlightened authors on the subject, diametrically opposite to what Dr. G. supposes to be the prevailing doctrine.*

That the intellectual principle within us should be subject to disease like a liver or stomach, is quite absurd, whether we look upon that principle as an immortal spirit, or a mere function of the brain. To the materialist we need not address our observations, for he can have no difficulty in conceiving insanity to be a corporeal disease; but the Christian and Platonic philosopher seeing purely *moral* causes produce aberrations of the *intellect*, is naturally led to inquire how this can be a *corporeal* derangement. In the first place, we are to recollect that all the operations of mind are revealed *through* matter; although this revelation does not prove the identity of mind and matter. Does music prove the flute and the performer to be the same thing? We cannot possibly have music without an instrument, whether that instrument be an artificial contrivance of wood or wires—or a natural apparatus, as the larynx. It is so with the manifestations of the human soul. It must have a brain to manifest itself through. And as, in the case of the musician, a broken string or an obstructed tube will derange the operations of a Handel; so a corporeal disease of the brain, whether idiopathic in that organ, or symptomatic of other affections in the system, must inevitably derange the intellectual operations.

But if corporeal disease be the cause of insanity it does not follow that the corporeal disease itself results from material causes. A man takes up a newspaper and reads a frightful piece of intelligence respecting some of his family. The process of digestion in the stomach is instantaneously arrested, and his tongue becomes dry and coated in a few minutes. Or an officer is publicly insulted, and, in the vio-

* See for instance, the Reviews of Esquirol, Haslam, Burrows, &c. &c.



lence of his rage, becomes quickly *jaundiced*, delirious, and dies.* Now if a moral impression on the sensorium be capable of instantly disordering the functions of various distant organs, is it not likely to suffer in its own structure or functions, both by these primary impressions, and through consent with those other organs secondarily affected? Undoubtedly it is; and it is in this way *principally* that the sensorium becomes deranged either in structure or functions, and consequently incapable of manifesting correctly the operations of the mind or soul—in other words, insanity is *generally* produced by moral causes inducing corporeal disorder, and that corporeal disorder embarrassing the intellectual functions.

This view of the etiology and pathology of insanity leads, we believe, to the most successful treatment. As moral and physical causes combine in the production of the disease, so moral and physical remedies must be combined in the removal of it.

“Sunt verba et voces quibus hunc lenire dolorem
“Possis, et magnam morbi depellere partem.” *Hor.*

The above, we believe, are the sentiments of the best modern physicians, and they are those which Dr. Gooch has in this paper laboured to maintain. No one can read the article in question, without being impressed with a deep conviction that its author possesses talents of a very high order, brightened and improved by careful observation and mature reflection.



XIII. *Some Observations on the Duodenum, with plates, descriptive of its situation and connexions. Extracted from the Gulstonian Lectures.* By G. D. YEATS, M. D. F. R. S. Fellow of the Royal College of Physicians, &c. &c.

VERY little doubt can be entertained that the office of the duodenum is nearly, if not quite, as important as that of the stomach; and when we consider that it receives the secretions of two other organs (the liver and pancreas) one of which is liable to numerous derangements, there can be no question that this second stomach is the seat of a variety of ailments,

* “Un jeune militaire recoit un soufflet dans un lieu public, et dans la fureur qui le transporte, il tire son épée pour percer celui qui vient de lui faire une insulte aussi grave. Presque au même instant, il devient icterique, et bientôt après il est pris de fièvre avec délire, et meurt au milieu de convulsions.” *Bricheteau.*

both of function and structure, though not noticed in any of our modern systems of practical medicine. "*Et quemadmodum usus amplissimus* (says Hoffman, de duodeno, vol. iv. page 190) *et longe maximus est illius; ita etiam si vitium vel defectus in illud incidit, si intemperie menstruales succi laborant, si debitus tonus hujus eximæ partis læsus vel destructus fuerit; magna inde turbatio in universa corporis œconomia et ingens malorum proventus exurgit.*"

As this is a very important subject, and Dr. Yeats's paper a very able one altogether, we shall be excused for giving not only a minute analysis of it, but for collecting observations that bear on this point of pathology from various other sources.

Dr. Yeats very properly opens this dissertation with some remarks on the physiology of the duodenal digestion. The pulsatious mass is passed from the stomach into the duodenum, with its solid parts in a diminished state of aggregation. It now becomes mixed with the secretions from innumerable glands, more particularly situated at the commencement of the duodenum. The chyme is thence propelled to the sacculated angle of the gut, where it is attached to the capsule of the right kidney. Here it receives the hepatic and pancreatic secretions, and undergoes a change by which is produced chyle. Dr. Yeats is inclined to attach some importance to the connexion of the duodenum with the colon, whereby the motions of the one are communicated to the other.

"In this way it is probable a great part of the evil arises, which takes place in constipation; for when the colon is much distended with hardened fæces, it must press with some force on the ascending part of the duodenum, thus still further impeding the progress of the contents of the latter which have also to rise against gravity, when the body is in an erect position or recumbent on the right side. For this reason, it is always advisable, previous to giving an opiate clyster where there is violent pain and vomiting from a gall-stone sticking in the duct, especially if the bowels have not been recently evacuated, to direct an opening enema to be injected, to unload the colon of those contents which, by distending it, cause pressure on that very part of the duodenum where the ductus communis opens, and thus impede the passage of the stone into the intestine. Be it recollected too that this bend of the duodenum is exactly between the right kidney and the ascending part of the colon, and that therefore much distention of it would in fact force the duodenum against the hard substance of the kidney, and would contribute to obliterate its cavity by the pressure of its sides against each other." 330.

The duodenum is very peculiarly and securely situated. It is studded with glands, extremely vascular, and its nerves

have an extensive communication with the rest of the body by connexion with the par vagum, and great sympathetic, through the medium of the semi-lunar ganglia.

“ It is the most important recipient in the human body, receiving more various kinds of ingesta than any other organ : and notwithstanding it is less than the stomach, it has a greater capacity than the other intestines except the colon. It was necessary that the stomach should not only be greater because it receives the food in the gross, if I may so express it, but on account of the large quantity [of ingesta, particularly of liquids which is sometimes thrown suddenly into it. The duodenum, on the contrary, receives the food gradually through the pylorus, and in a small quantity at a time, and in a more homogeneous state.” 335.

In a pathological point of view, it is evident, as Dr. Yeats observes, that the duodenum is as liable to all the consequences of imperfect digestion as the stomach, with the probability of their being more distressing in the duodenal affection, in consequence of the elaborate manner in which this intestine is constructed, and the important fluids poured into it. It is probable, Dr. Yeats thinks, that the duodenum may have considerable power to correct imperfections in the gastric digestion ; but if imperfect digestion take place in the duodenum, it does not seem likely, from their structure or functions, that any improvement can occur in subsequent portions of the alimentary canal.

The extrication (probably *secretion*) of gas is a very constant attendant on indigestion of our food. And from the situation and connexion of the duodenum, the distention this occasions must be productive of various distressing effects both in the neighbourhood of the organ, and at great distances.

“ The duodenal nerves come off from the right hepatic plexus, which also supplies the gall-bladder, biliary ducts, pylorus, pancreas, and kidneys, and then they pass on to the substance of the liver ; hence we see that duodenal distention will, by nervous connexion, (independent of mechanical effects) produce irritation in all these parts. The intestines have their healthy peristaltic action maintained by the nervous influence from the solar plexus, through the nerves distributed to their fine and beautiful vascular coat ; an irritation of these nerves will not only cause spasm, but, by continuance, inflammatory action. The duodenum is extremely liable to the same effects : it is supplied with nerves directly from the eighth pair which communicate with the stomach and pylorus ; thus, besides the universal connexion between the par vagum and sympathetic, it receives some filaments from the semi-lunar ganglions and hepatic plexus ; and as at its lower end it receives nerves from the superior mesenteric plexus, which communicates with the renal

plexus, it is clear how a morbidly irritated duodenum will produce uneasiness in nearly the whole of the abdominal viscera, causing irritation in the intestines, stomach, œsophagus, kidneys, the right particularly, liver, &c. &c. and as the hepatic plexus is formed from the semi-lunar ganglions, in which are concentrated not only the nerves which supply the chylopoietic viscera, but in which terminate those nerves, which, in their progress from the brain, either give branches to, or inosculate with, nerves which supply the œsophagus, lungs, heart, diaphragm trachœa, larynx, pharynx, chest, muscles of the face, lower jaw, and neck; hence the headache, vertigo, contortions of the countenance, rolling of the eyes, asthma, cough, pains about the chest and shoulders, which accompany duodenal irritation. And that while oily emulsions and expectorants, which only add to the mischief, have been prescribed in such coughs and asthmas, medicines of a very different class should be given." 340.

Dr. Yeats might have quoted Hoffman in support of the above sentiments. Speaking of morbid biliary secretions in the duodenum, Hoffman remarks—"tenerrimas membranas duodeni flatibus distentas corripit, quæ dein in consensum trahunt diaphragma, plexus mesentericos stomachales, pneumonicos, et sic violenta fit tussis, quandoque cum vomitu et suffocationis metu, &c. ***** Quandoque etiam affectus istorum succorum in duodeno primisque intestinis stagnantium usque ad caput se exerunt, et cephalalgias, vertiginem, torporem omnium sensuum, imo apoplecticos insultus ibi machinantur."*

Here Hoffman relates some curious cases, and quotes others, illustrative of the various sympathetic affections of distant organs and parts, produced by irritating secretions in the primæ viæ—facts which appear *new* to some physicians of the present day, who do not look back a little among the works of the illustrious dead.

Dr. Yeats goes on to observe, that in addition to these distant symptoms produced by nervous sympathy, painful sensations of a more local nature, arising from mechanical pressure of the distended duodenum, will take place. Pain and spasm will then be produced; and pressure on the biliary and pancreatic ducts will obstruct the egress of their respective secretions, giving rise to soreness and sense of fullness at the pit of the stomach, and a jaundiced appearance of the skin. Under these circumstances, Dr. Yeats has no doubt (indeed we know many instances of it) that patients have been salivated for disease of the liver, when this last organ was perfectly sound in structure, and only disordered in function, through consent with the duodenum.

* De Duodeno, tom. iii. p. 192. fol. ed. Genev. 1761.

"Should it so happen, that calculi are contained in the gall-bladder, the pressure from the distended duodenum will cause additional pain by rubbing the rough stones against its sides. A great deal of pain will be felt across the back, and especially in the region of the right kidney, from the connexion which the duodenum has with its capsule, and a quantity of pale urine is often past, from irritation of the renal vessels, both locally and through the medium of the renal plexus of nerves." 343.

Dr. Yeats thinks, and not without reason, that all this distention and pressure must, more or less, obstruct the circulation of the bowel itself, and thus keep up an inflammatory irritation there. The portal circulation will also be impeded, and thus, plethora produced in the meseraic veins, with a varicose state of vessels in the legs, or hæmorrhoidal affections. These circumstances have been very pointedly alluded to by Hoffman.

"Videlicet dum intestinum vehementer distenditur, non modo tunica, quæ exquisito sensu pollent, affliguntur, sed et rami plexus mesenterici tenduntur; nec non, *vasis sanguineis compressis*, congestio sanguinis fit circa truncum venæ portæ, et initium arteriæ meseraicæ: sequitur hinc fixus in lumborum prima vertebra dolor, præcordiorum anxietas, appetitus dejectio, somni et virium defectus, alvique adstrictio." *Hoffmani Opera*, Tom. IV. p. 191.

That accurate anatomist, and able pathologist, Mr. Charles Bell, observes thus:

"We find that there are poured into the duodenum from the liver and pancreas, secretions which have an extensive effect on the system of the viscera; and we must acknowledge, that the derangement of these secretions must operate as a very frequent and powerful cause of uneasiness, and that the duodenum must often be the seat of disease and distressing symptoms. We may observe that, from the course of the duodenum, pain in it should be felt under the seventh or eighth rib, passing deep, seeming to be in the seat of the gall-bladder, and stretching towards the right hypochondrium, and to the kidney, and again appearing as if in the loins." *Vol. III. p. 281.*

We have seen two distinctly marked cases of duodenal disease, where pain in the *loins* was the most distressing symptom of all. Dr. Yeats next observes, that the duodenal affection soon leads to unhealthy discharges from the liver and pancreas, causing a great accumulation of irritating matter in the sacculated portion of the duodenum, with torpor throughout the whole line of the alimentary canal, and languor and lassitude of body. Dr. Yeats thinks, that the confinement of the duodenum at its termination within the ring at the root of the mesentery, will, also, increase the difficulty in the propul-

sion of the duodenal contents : consequently, at this point, the more indigestible and fecal portion of the food, may sometimes lodge, and produce a temporary obstruction of the passage. Our author has no doubt that, repeated absorption by the lacteals of the acrid contents of the duodenum, produces disease and enlargement of the mesenteric glands, and ultimately *tabes mesenterica*.

“The liver, pancreas, and duodenal glands, will become diseased from congestion and irritation, and this irritation will be propagated by nervous communication to the brain ; it will, sooner or later, run into inflammatory action and produce effusion there, or the irritation will chronically continue giving rise to spasms, convulsions, vomiting, contortions of the countenance, affections of the sight, violent headaches, faltering voice, chorea and palsy.” 350.

The following symptoms in adults have been caused by duodenal disease, and have been mistaken for a liver complaint, to our author's knowledge. The appetite declines, or becomes capricious : flatulence is troublesome ; languor and lassitude are considerable, accompanied by sense of weakness in the lower extremities, occasional chills, feverish heats, pain and sense of weight in the right hypochondrium and across the loins, torpid bowels with dark coloured feces passed without being figured ; urine of a mahogany colour, sometimes transparent, sometimes with a lateritious or white sediment, or thick like gruel and water ; slight nausea ; restless nights ; white crusted tongue, brown towards the roots ; occasional giddiness or headach, or affection of vision ; pulse little accelerated—sometimes preternaturally slow, or intermitting—train of nervous symptoms. The food causes oppression—a dyspnoea, with, sometimes, a troublesome cough adds to the restlessness of the nights—despondency, and, after some time, a yellow tinge in the eye, take place.

“Upon examining patients with the above symptoms, a fulness and puffiness will be sometimes perceived to the right of the pit of the stomach. I say sometimes, because it will depend on the quantity of extricated gas confined in the duodenum, or upon the existence of morbid action at the time, whether this symptom be present or not. By pressure on the region of the liver no uneasiness will be complained of, but if the pressure be made with the edge of the open hand under the ribs with the palm of it flat upon the abdomen, considerable uneasiness will be complained of up towards the liver and down towards the right kidney, a soreness too is felt an inch or two to the right just above the navel. Such patients will trace with most anatomical accuracy, the course of the duodenum with their finger, from the stomach to the loins on the right side, and back again across the abdomen to the umbilicus.” 353-4.

Under such circumstances, our intelligent author observes.

that the general routine of giving a few doses of calomel and salts, and then stimulants and tonics, produces no permanent good effects, "for the duodenum relapses into its inactivity after a brisk purge," particularly of calomel. The stimulus of ammoniacal salts gives only temporary relief, and should spirituous liquors be resorted to, they increase the evil, and induce organic disease. "The preparations of steel create nausea; the simple bitter infusions lie cold and heavy on the stomach, and the addition of aromatic or spirituous stimulants do not remove the difficulty."

"Notwithstanding, however, that bitters disagree, yet, when combined with a cathartic in such quantity as to give a gradual evacuating movement to the intestinal canal, they produce the happiest effects, ℥j. of quassia, and the same quantity, or ℥ij. or ʒi. rarely the last, of senna infused in a pint of boiling water for an hour, produce the composition I employ; fʒiss. of this infusion taken in the morning and repeated at noon, with pil. hydrarg. gr. iij. every night for about a fortnight, most generally remove this uneasy state of the duodenum." 357.

Hoffman has given nearly similar counsel in these cases. "Itaque ubi ejusmodi casus incidit, non satis est, dictis remediis ægrotantem tractare, sed validiora adhibere oportet, quem in censum referenda *aperientia fortiora, salia, et quæ ex Rhabarbaro, et mercurio dulci constant medicamenta.*"

We have taken several occasions, in this Journal, to hint that, practitioners of the present day appear almost to have discarded *emetics* from their prescriptions, and depend entirely on purgatives. Yet we have seen such decidedly good effects from emetics, judiciously administered, that we cannot help recalling the attention of the profession to this almost exploded remedy. In the class of complaints under review, gentle emetics are often serviceable, and we recommend our brethren to reflect on the following sentence of the experienced Hoffman.

"Quod praxin et viam medendi attinet morborum, qui in duodeno et prima regione sedem fixerunt, facile ex dictis apparet; *emetica diligenter præparata et prudenter exhibita, hisce morbis unice auxiliari. Emetica sunt generosa et valida remedia.*" *Opera*, Tom. III. p. 195.

Although somewhat out of place, yet we cannot help here observing, for the gratification of the Broussaian School, that Hoffman joins his testimony to that of Helmont, of Sylvius, and of Riverius, that the real seat of *fever* is in the primæ viæ—"nidus febrium est in *primis officinis*, extenditur scilicet à pyloro ad duodenum," &c. *Loco citato*. This is precisely the *new doctrine*, about which our continental bre-

thren are so fiercely contending. We fear, however, that neither its novelty nor antiquity will enable it to do more, than "strut and fret its hour upon the stage," and then die away, perhaps to be again and again resuscitated in future ages—

————— ut unda impellitur unda,

Urgeturque prior veniente, urgetque priorem.

When this morbid condition of the duodenum is attended with feverish heats, and high-coloured scanty urine, our author adds to the bitter, instead of the senna, some neutral salt, particularly the sulphat of soda, which, he thinks, has a more specific effect on the duodenum, than the sulphat of magnesia. He gives a scruple twice a day in the quassia infusion, and three grains of the pil. hyd. with or without aloes, according to the state of the bowels. When symptoms of inflammatory action prevail in the duodenum, the saline draught, with sulphat of potash, and the blue pill alone, are highly useful. A proper attention to diet and exercise is necessary of course.

"It is here a matter of more than medical curiosity, to form a discrimination between a liver disease on one hand, and a simple dyspeptic state of the stomach on the other, as contra-distinguished from a morbid state of the duodenum simply. In some cases where the duodenal disease has existed for a considerable time, the diagnosis becomes almost impossible, although an experienced practitioner may form a very good opinion; because a morbid train of symptoms takes place, by which liver, duodenum, and stomach, are blended in one affection, emphatically termed, a disease of the digestive organs. In a simple disease of the stomach, we have very little swelling or puffiness in the epigastric region, and when it does take place, it is more to the left side. We have also, eructations of wind and of acrid matters. These circumstances vary very considerably in a diseased duodenum; a swelling is very apt to occur, the extricated gas finding a greater difficulty to escape, either by regurgitation through the pyloric orifice, or downwards, from the particular situation of the intestine at the mesenteric ring. There are, therefore, no eructations of wind or of acrid matters in a dyspeptic state of the duodenum; and when the puffiness is detected, it is a diffused swelling towards the right hypochondrium, being lost under the liver and not extending to the left side, and circumscribed in that direction.

"A diagnosis between affections of this intestine and the liver is more difficult, on account of the latter being so readily affected by a disease of the former, particularly when a slight jaundice has taken place, not from a diseased liver, but from the bile not finding a ready passage into the ill-conditioned duodenum; an experienced physician must then form his opinion from the accumulation of symptoms, and from his recollection of similar cases. If the symptoms

of a liver disease, particularly the yellowness of the eyes, tension of the side, and lateritious sediment of the urine, speedily disappear by the treatment, we may be perfectly satisfied that these hepatic symptoms are produced by duodenal irritation, and that the patient may be safely tranquillized on that ground by his anxious physician; if on the contrary, these symptoms are obstinate, and they seldom are, without having so much disordered the general system, as to awaken, very early, the suspicions of the physician, then that science and accumulation of facts, which taught him the discrimination, will immediately suggest to him the more active and appropriate remedies for the liver disease according to its kind and degree." 361-2-3.

But our limits are exceeded, and we must now close the analysis of a paper, which does great credit to the acute observation of its very able and ingenious author. Two plates and some pages of explanation, conclude this interesting article.



XIV. *Observations on the Hour-Glass Contraction of the Uterus.* By John C. DOUGLAS, M. D. Licentiate of the College of Physicians, Ireland.

THIS is a very sensible paper, and we are convinced of the truth of the doctrine there inculcated, from many observations made in the early part of our obstetric practice, when we were in the habit of meeting—or rather *producing*, what are termed hour-glass contractions of the uterus, by officiously and awkwardly groping about in the dilated vagina, before the uterus had time to contract and detrude the placental mass.

Authors have generally attributed retention of the placenta to hour-glass contraction, morbid adhesion, or inaction of the uterus. Dr. Douglas adduces it as his opinion, that the placenta is rarely, if ever, *primarily* retained by the kind of uterine contraction under consideration—"its formation (hour-glass contraction) being merely the result of the undecided manner in which the practitioner introduces, or attempts to introduce, his hand, with the intent to extract a placenta that had been retained by one of the other two causes."

Instead of the usual division of the uterus into fundus, body, and cervix, without any positive limits, our author would dispose of them thus:

"I would so arrange them as to apportion $\frac{1}{3}$ to its fundus, $\frac{1}{3}$ to its body, and $\frac{1}{3}$ to the cervix. By this division, the upper and lower sections on the long diameter of the uterus, are of equal length; and the middle section is equal to one and a half of either." 386.

But as the uterus and vagina, at the period of delivery, form one continuous canal, our author would divide the combined two, into four portions, and of the entire, assign $\frac{1}{8}$ to the fundus, $\frac{1}{8}$ to the body, $\frac{1}{4}$ to the cervix uteri, and $\frac{3}{8}$ to the vagina. In this arrangement we find the fundus and body to comprise the entire of the thick muscular substance of the womb, while the portion allotted to the cervix, partakes more nearly of the structure of the vagina. Instead, therefore, of considering, at the period of labour, the entire of the uterus as one organ, and the vagina as another, it would be more proper, Dr. D. thinks, to consider the fundus and body as one, possessing a common structure, and the cervix uteri and vagina as another, being, also, of a nearly common texture. The physiology of the parts countenances this arrangement. The functions of the cervix uteri, during labour, are the very reverse of those of the fundus and body. These last, exert a contractile and expulsive action, while the cervix relaxes in sympathy with the vagina. Our author remarks, en passant, that, in his experience, the protraction of labours has arisen more frequently, from "want of yielding elasticity in the cervix uteri and vagina, than from deficiency of expulsive action in the body and fundus." Here Dr. Douglas asks the practitioner if, in any case, after having overcome, what is termed, the hour-glass contraction, he has ever found the placenta, in the upper chamber, detached? —We can only answer for ourselves, that we never did. And we can well remember the painful stricture on our arm, while slowly and carefully detaching the placenta from the fundus uteri. If general experience shows (and our author thinks it will) that the adhesion, in question, always obtains, it will doubtless go far to prove, that the detention of the after-birth is owing to this, rather than to the contraction of the uterus. To account for this contraction, Dr. Douglas observes, that the practitioner, while searching in vain for the placenta, unconsciously irritates the lower edge of the thickly muscular part of the uterus into action:—

"The hour-glass contraction is the usual result of this irritation; and, by the time the practitioner has discovered his error, a barrier is thus opposed to the further progress of his hand." 391.

Some time after adopting the above theory, our author seized an opportunity, in a case of retention, to introduce his hand just within the cervix uteri, delaying it there designedly, until "the uterine cavity gradually assumed the hour-glass form." He then quickly passed up his hand to the fundus; without allowing the constriction to close so much as to materially impede its progress.



It had always appeared to our author an enigma that this hour-glass contraction, as it is called, should be inherent in a circular band of fibres at the centre of the uterus, and that the same structure, both above and below this belt, should remain quiescent and relaxed.

"But this stricture does not form from the middle circumference of the uterus; it is formed by the lowest verge of its thickly muscular substance at the line of demarcation of its body and cervix. Which line, in my arrangement of parts, is at an equal distance from the os externum of the vagina and the farthest part of the fundus uteri." 393.

From this it would appear that the upper chamber comprises the entire of the body and fundus, while the lower engages only the cervix and vagina, the two compartments being nearly equal in capacity. We shall sum up our author's conclusions in his own words, viz.

"That the remote cause of the uterus assuming the hour-glass form, is a miscalculation of the distance (which is not less than fifteen inches) at this period, from the os externum to the fundus of the uterus.

"That the exciting cause is irritation, produced either in the vagina, by injudicious pulling at the umbilical cord; or, in the cervix uteri, by the accoucheur's hand searching there in vain for the placenta.

"That the proximate cause is a spasmodic constriction of the muscular fibres of the uterus at the lower verge (not at the centre) of that section termed its body, and just where it ceases to be thickly muscular.

"Thence, I conclude that this hour-glass contraction is not produced by any principle of action inherent in the uterus itself: and that whenever it does occur, it is caused by mismanagement.

"Therefore, in order to avoid such occurrences, the practitioner should always refrain from exciting unnecessary irritation.

"And, in those few cases of unavoidable retention of the placenta, wherein it may be necessary for the accoucheur materially to interfere, he should, having first cautiously inserted it within the vagina, push his hand briskly up to the very fundus of the uterus. And, in this operation, he should direct the hand forward towards the umbilicus; ever bearing in recollection that the axis of the uterus, as well as the axis of the pelvis, inclines at a considerable angle to the axis of the trunk of the body." 397.

Our author's reasonings appear to us not only ingenious but solid; while the practical indications which result from them are useful and safe to act upon.

XV. *On the Necessity of Caution in the Estimation of Symptoms in the last Stage of some Diseases.* By Sir HENRY HALFORD, Bart. M. D. F. R. S. Now President of the Royal College of Physicians.

PROGNOSIS is by far the most difficult branch of medical science. To distinguish one disease from another, or to treat the complaint when known, is comparatively easy: but to say how a disorder will terminate, especially when it has advanced far, and already menaced life, requires the judgment of a master—of a man long conversant with the vicissitudes of disease, the extent of nature's power, and the resources of human art. That old age too often generates a degree of caution bordering on timidity, in the physician, is not to be denied, but to be regretted as one of those inevitable failings of our nature that mark the hand of time desolating the mansion of thought, and enfeebling the energies of the soul. There is, however, another species of caution, not seldom confounded with the foregoing by the precipitancy of youth, the temerity of inexperience, or the arrogance of ignorance. It is that prudential reserve in delivering a prognosis which is grounded on a knowledge of the uncertainty of events, and the fallacy of appearances, acquired by long and careful habits of reflection, amid scenes of sickness and death. This is the species of caution which is recommended to our notice by a man who has arrived at that period of life when the judgment is matured by experience, but unimpaired by years. It is a caution, from non-attention to which we have often felt the mortification arising from false predictions—and the misery of having inspired hopes when ruin was impending, and despair at hand. We presume then, that every man who has any regard for his professional character and moral feelings will ponder with us on the following observations which Sir Henry Halford has offered to his medical brethren.

Our author truly remarks, that it is of great importance to be able to foretell the issue of a disease. When it is of a fatal nature, and this is not stated to the friends, their grief is rendered doubly poignant by the idea that the physician himself was taken by surprise, and therefore probably had not made use of all the resources of his art, by which the catastrophe might possibly have been prevented. On the other hand, a prudent and feeling disclosure of his apprehensions would have mitigated the sorrow of the relatives, whose conclusion would be that every thing which skill could suggest had been done to avert the hand of death. Sir Henry Halford properly observes, that the art of physic is so far con-



jectural, as all reasoning must be, which presumes on what *will* happen from what *has* happened—the only legitimate reasoning of which the science of medicine, in common with many other sciences, admits.

“And it suggests therefore, the necessity of recording facts, carefully ascertained by repeated experience. Were this done by every physician of extensive practice, what appears extraordinary in a single instance, would become familiar by repeated observation, and the difficulty of prognosticating would be materially diminished; to the great credit of physic, and to the satisfaction of its professors.” 400.

Our author remarks that, towards the close of some disorders, both acute and chronic, especially where the constitution has had a violent and protracted struggle with the disease, appearances present themselves of a very equivocal and delusive nature, with which the issue of the malady does not correspond. Here nature appears to pause for a moment, after the disease has done its worst—the frame is exhausted by its own efforts, and a general tranquillity pervades the whole system. The eager wishes of friends are apt to misconstrue this condition into the commencement of recovery, especially as the patient generally admits that he is better, having lost some of his sufferings. The physician here must be cautious how he indulges the same lively hopes, lest he compromise his character, and aggravate the feelings of the family.

Sir Henry has seen this fallacious truce in four or five instances of phrenitis. We shall give the following case in the words of our able and experienced author.

“A young gentleman of family, about twenty-five years of age, took cold whilst under the influence of mercury. The fever increased daily until it was accompanied at last by so much excitement and delirium, as made it necessary to use not only the most powerful medicines but also personal restraint. At length, after three days of incessant exertion, during which he never slept for an instant, he ceased to rave, and was calm and collected. His perception of external objects became correct, and they no longer distressed him, and he asked, pressing,ly, if it were possible that he could live? On being answered tenderly, but not in a way calculated to deceive, that it was probable he might not, he* dic-

* “My friend Dr. Heberden, when I mentioned this case to him, showed me a note which his father had received from a patient, written in the interval of the subsidence of a paroxysm of phrenzy and his death, which happened about fifteen hours afterward. The note is of some length, and is written correctly.

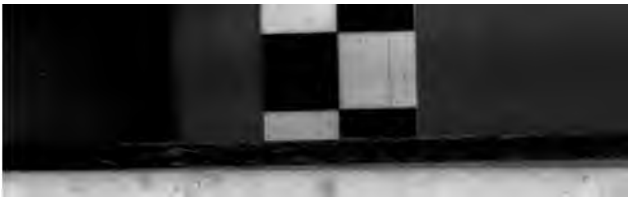
See the chapter of Aretæus on the *Kavros*, as remarkable for the sublimity of the ideas which it contains, as for the beauty of the Ionic Greek in which they are expressed.”

tated most affectionate communications to his parents abroad, recollected some claims upon his purse, "set his house in order," and died the following night. The reason why so unfavourable an opinion was entertained of his state, was, that the apparent amendment was not preceded by sleep, and was not accompanied by a slower pulse, two indispensable conditions on which only a notion of real improvement could be justified. But here was merely a cessation of excitement occasioned by a diminution of power, and by a mitigated influence of the action of the heart upon the brain." 404.

It is notorious, as Sir Henry Hallford observes, that in inflammation of the bowels, mortification often follows a cessation of pain; but in that partial inflammation produced by a strangulation of a portion of bowel in hernia, how often have we occasion to deplore the broken hopes of relatives after a surgical operation had promised that all was well. It is an invariable, and we think very prudent, rule with our author, still to consider life in jeopardy until the intestines again perform their functions; the stomach is free from irritation, and the skin remains universally and agreeably warm.

An abscess in the liver, connected with gall-stone, sometimes assumes the type and character of an intermittent fever, and may be incautiously mistaken for, and treated as, this last affection. The preceding hepatic inflammation—the violence of reaction in the second stage—the affection of the brain, amounting to an apoplectic stupefaction—the deep brown tinge of the skin in the paroxysm—these will enable the attentive physician to discriminate the periodical accessions of fever, in hepatic abscess, where they occur, from common miasmatic intermittent. Our experienced author saw three instances of this masked disease, two of whom died in the fourth paroxysm—the life of the third was protracted a fortnight, in consequence of the abscess bursting into the channel of the intestines, and the matter passing off in large quantities by stool.

In hydrothorax Sir Henry Hallford cautions the physician to be on his guard, when delivering an opinion in the advanced stages of the disease. A material mitigation of the dyspnoea generally takes place when the legs swell, and may thus induce the medical attendant, as well as the patient and friends, to entertain too sanguine hopes that the hydropic affection of the extremities is the only remaining malady to combat. Our author remarks, "that if this swelling of the legs disappear without an increased discharge of urine, the patient generally dies very soon, and most frequently suddenly. Whereas, if an ample increased secretion by the kidneys follow the relief of the dyspnoea, then every good hope of a temporary recovery, at least, may fairly be enter-



tained, though it should be acknowledged, that this species of dropsy, above all others, is most apt to return."

The confluent smallpox, in a certain stage, requires, our author observes, a guarded prognosis.

"The physician may fairly acquiesce in the fears of a family, when, on the completion of the eruption, he sees the face and breast one mass of disease, and may most reasonably doubt the capability of the constitution to mature and perfect so large an eruption. But he must not hold out unfounded hopes to the parents if the malady proceed in the next stage, in a most satisfactory manner, beyond his expectations;—the pustules ripening fully, and the process being complete—for alas! at this very moment it may be, the patient is sinking—is dead & the powers of his constitution being exhausted by the efforts it has made, and no longer equal to the accomplishment of a protracted cure." 408.

Analogous, in some measure, to the maturation of variola, is the reparation of skin when extensively destroyed by fire. Our author has seen several instances of this kind, four of which proved fatal, "and yet, in every one of the four, the wound had healed, with the exception of the space only of a crown piece." Two of these died, "no warning given" by any particular symptom of danger. Prudence, therefore, will induce the practitioner to consider the patient in some danger, after extensive burns, till the wound has been entirely healed for some time, and the constitution has recovered its usual energy.

Of paralysis of the kidney, Sir Henry Halford has only seen five instances in a practice of twenty-seven years. The last happened about two years ago, and as it was an exact copy of all the others, we shall introduce it in the author's own words.

"A very corpulent robust farmer, of about fifty-five years of age, was seized with a rigour, which induced him to send for his apothecary. He had not made water, it appeared, for twenty-four hours; but there was no pain, no sense of weight in the loins, no distention in any part of the abdomen, and therefore no alarm was taken till the following morning, when it was thought proper to ascertain whether there was any water in the bladder, by the introduction of the catheter; and none was found. I was then called, and another inquiry was made, some few hours afterward, by one of the most experienced surgeons in London, whether the bladder contained any urine or not, when it appeared clearly that there was none. The patient sat up in bed and conversed as usual, complaining of some nausea, but of nothing material in his own view; and I remember that his friends expressed their surprise that so much importance should be attached to so little apparent illness. The patient's pulse was somewhat slower than usual, and sometimes he was heavy and oppressed.

"I ventured to state that if we should not succeed in making the kidneys act, the patient would soon become comatose, and would probably die the following night; for this was the course of the malady in every other instance which I had seen. It happened so; he died in thirty hours after this, in a state of stupefaction." 412.

All the patients of this kind were fat corpulent men, between fifty and sixty years of age; and in three of them "there was observed a remarkably strong urinous smell in the perspiration twenty-four hours before death." The smallest quantity of urinary secretion, in such cases, should inspire hope, Sir Henry thinks, since it is surprising how trifling a measure of that excrementitious fluid is compatible with life and even health. "But the cessation of the excretion altogether, says our author, is universally a fatal symptom, in my experience, being followed by oppression on the brain."

Practitioners who are anxious to discharge their arduous duties, with honour to themselves, and satisfaction to their employers, will do well to bear in record these admonitory hints, (the fruit of long experience) from a man whose talents, erudition, and amenity, have conducted him with honour, and apparently without an enemy, to the enviable summit of his profession.



XVI. Case of Death by Poison, wherein impregnation had taken place, and the Ovum was detained in the Ovary, with an Engraving. By EDWARD STANLEY, Assistant Surgeon, &c. &c. at Bartholomew's Hospital.

THIS is an interesting account of an extra-uterine foetation by that accurate and zealous young surgeon and anatomist, Mr. Stanley. The unfortunate female had put an end to her existence by laudanum, and the general appearances, *post mortem*, are minutely detailed by our author. These we shall pass over, and come to the uterine system. The uterus itself was larger than usual, its substance being soft, and its internal surface covered by a layer of a yellowish white colour, of soft and spongy texture; exhibiting the usual characters of the decidua. The fallopian tubes were enlarged and remarkably twisted. The left ovary was larger than the right, and at its posterior part was a rounded prominence distinct from the general fulness. The external membrane of the ovary did not show any appearance of aperture. On this being divided, a distinct cyst was exposed, and within the cyst an ovum. The chorion and amnios were perfectly distinct, the cavity of the latter being filled with a yellowish honey-like matter, but no foetus could be found.



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Mr. Stanley concludes with some important jurisprudential remarks on the proofs of impregnation, before the ovum can be distinctly seen. The existence of a corpus luteum is no longer held as conclusive evidence, since excitement of the ovaries, from passion or unfruitful connexion, is sufficient to rupture the vessels and produce corpora lutea. Neither is the decidua in the uterus proper evidence, since that is produced, as our readers know, in some cases of difficult menstruation. Our opinion must be formed from a review of all the circumstances appertaining to the condition of the uterus, ovaries, and fallopian tubes—always recollecting however, that nothing short of the actual inspection of the ovum can be regarded as decisive testimony upon the subject.

We have now, we hope, presented to the profession a full and impartial analytical delineation of this volume, and thereby enabled the public to form a just estimate of its value as a whole. We are persuaded that our brethren at large will feel grateful to the contributors to the work, collectively and individually; and that, with us, they will hail with pleasure its annual or biennial returns, and deplore the slow pace of a quinquennial revolution.

VII.

Cases illustrative of the Efficacy of the Hydrocyanic or Prussic Acid in Affections of the Stomach, with a Report upon its Powers in Pectoral and other Diseases in which it has been already recommended, and some Facts respecting the Necessity of varying the Doses of Medicines according to Circumstances, and the use of Opium in Diabetes. By JOHN ELLIOTSON, M. D. &c. &c. One vol. 8vo.—1820.

THE adaptation of the various parts of the material world to our use is an admirable illustration of that benevolence which the Supreme Being exercises towards his sensitive and rational creatures. This truth, at all times conspicuous, becomes eminently so in an æra, when the penetrating search of the philosopher is continually developing a salutary tendency in those powers which are wont to be regarded as the very bane of our nature. A variety of disorders, which seemed almost beyond the reach of medicine, have, within these few years, yielded to the skilful management of the most virulent poisons. And heartily do we congratulate every practitioner of the healing art, that to this class of remedies another is

now added, which, we confidently believe, will be found inferior to none that have preceded it.

With the *prussic*, or (as it is now called) the *hydrocyanic** acid, every chymist must have been long familiar. Its pernicious effects on the animal body were first pointed out in a series of experiments performed by Dr. Madden, about the year 1730.† Soon afterward Dr. Browne Langrish instituted a number of trials with the view of determining the medicinal qualities of this deleterious fluid. Such attempts however proving nugatory, the prussic acid underwent little farther scrutiny, until Doctors Majendie and Granville about three years ago, again subjected it to the test of medical investigation. Their reports of its use in pectoral complaints were so favourable, as to induce the author of the little volume before us, to have recourse to it in his own practice; and, fortunately for mankind, here it was that the remedy happened, by mistake, to be administered to a person labouring under severe dyspepsia. The rapid amendment consequent upon its exhibition, excited a strong suspicion in the mind of Dr. Elliotson, that so striking a change had resulted from the employment of the acid. He resolved, therefore, on ascertaining the truth of this conjecture, by trying it on an extensive scale. An accumulation of *very valuable facts*, decisive of the accuracy of such an opinion, was the consequence. These form the bases of Dr. E.'s essay. They are divided into sets. The first set, comprising seventeen cases, is intended to illustrate the power of the acid over that affection of the stomach, which is indicated by *pain and tenderness in*

* The disposition which there exists to obscure the science of medicine, by the invention of high-sounding names, cannot be too severely reprehended. Even the chymists, whose predilection for hard words is notorious, saw enough of technicality in the title "*prussic*," to be satisfied. Why then should the sons of *Æsculapius* feel so desirous of a change? Is it (which is their only excuse) that they fancied they had found another term more descriptive of the thing signified? If so—grievously we apprehend have they erred in judgment. For, granting that every one understood the language from which the word is derived, and that no inconvenience would arise from its extraordinary length, (both of which suppositions are inadmissible) even then we deny that the adjective *azuro*, serves so well to denote the exact species of blue resulting from the trifling combination of acid, alkali, and iron, as that epithet, which, by a reference to the very substance itself, must immediately recall the precise idea of colour, if originally excited in the mind.

† These experiments were indeed performed with *laurel water*; but as no doubt is now entertained of the identity of its active ingredient with Prussic acid they have been adverted to as fair illustrations of the virtues of the latter fluid.



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the epigastrium simply. Ten of the persons thus afflicted were females. Generally, they had attained to the middle, or rather the advanced periods of life; and the duration of their complaint varied from a few weeks or months, to as many years. But, notwithstanding its almost inveteracy, it gave way to the use of the acid. In the majority of instances, indeed, the cure was effected in a few days or weeks; in none was it protracted so long as two months. We pass on then to the second set, in which we are presented with ten cases of pain and tenderness, accompanied by the usual symptoms of *dyspepsia*, as *flatulence*, *vertigo*, *headach*, *loss of appetite*, *nausea*, *vomiting*, *debility*, *nervousness*, *cough*, and *dyspnœa*. Here, also, the acid proved equally successful, although the complaint had existed months, and, in some instances, even years. The control, in short, it manifested over these multifarious symptoms, would alone afford a sufficient demonstration of its extraordinary influence in stomach derangements. But, satisfactory as must be this conclusion to every unprejudiced mind, it will receive yet further confirmation from the five cases included in Dr. E's third division. These were examples, differing in no respect from those just mentioned, except in their greater degree of severity, and in being marked by an additional symptom, (viz.) *the pyrosis or watery secretion of the stomach*. No one can be ignorant how apt is this obstinate species of indigestion to baffle the endeavours of the most skilful. But, even here, our remedy did not fail: for in three of the five cases specified, it soon effected a perfect cure; and, so remarkable was the improvement in the remaining two, that, had the medicine been duly persisted in, complete success would, doubtless, have followed.

Instances of *dyspepsia*, characterized by the frequent *recurrence of vomiting*, are by no means uncommon. To elucidate the efficacy of the acid over this modification of the disorder, eight cases are succinctly given, which, though of considerable standing, were all, in no long time, removed.

In the very brief analysis we here attempt of Dr. E's treatise, it is incumbent on us not to overlook a *circumstance*, which might be considered as affecting the validity of his conclusions. On a few occasions, he prescribed (he informs us) a *gentle laxative* in conjunction with the acid. It is possible, therefore, the good ascribed by him to this latter remedy might, with greater justice, have been attributed to its concomitant. Anticipating however this objection, the Doctor has obviated it by the introduction of five other cases, which constitute his fourth division. In the first of these the patient progressively recovered, his bowels being, all

along, in a constipated condition; in the second, scarcely any amendment took place for a considerable time, though they were kept relaxed by appropriate medicines; in the third, fourth, and fifth cases, complete restoration ensued, notwithstanding the most obstinate costiveness. Hence, then, it is obvious, that the particular state of the intestinal canal possesses very little influence, either in promoting or retarding the salutary operation of our remedy on the stomach. At any rate, its power of restoring the healthy functions of this organ, does not appear to be diminished by the *existence of fecal accumulations*. With what shadow of probability, then, can the sanative process in question be ascribed to the *laxatives*? These reflections bring us to Dr. E's sixth and last division, which, although it include only four cases, is, we apprehend, one of no ordinary importance. It states the efficiency of the acid, in that formidable species of dyspepsy, which often *counterfeits diseases of the heart*. So exactly do the more prominent features of these opposite affections correspond, that we confess it has occurred to us, to mistake the one disease for the other. The vehement and rapid pulsation in many instances of stomach ailments, accompanied, as it often is, by acute pains darting from the sternum and left breast, down the spine and left arm, together with the benumbed sensation of this member, and the hurry and dejection expressed in the countenance, are calculated to mislead even the most wary. But, in the prussic acid, we have an excellent method of discrimination: for, should they appear altogether beyond its control, they may fairly be presumed to be connected with some structural derangement of the circulating organ.

Such, then, is Dr. E's experience with regard to the virtues of this remedy in *functional disorders of the stomach*. Highly extolled as it has been in a variety of pectoral complaints, it did not, in the hands of our author, appear to deserve the encomiums it has received. He found it indeed, serviceable, in simple dry cough, and the spasmodic asthma; but in pneumonia and hooping-cough, it seemed altogether useless. In phthisis it produced a slightly soothing effect, and that only occasionally. In hæmorrhages, in palpitations of the heart from organic derangements, and in all other disorders where it is desirable to diminish the force of the blood's motion, our author apprehends the prussic acid will prove of little avail. Several hysteric, epileptic, and maniacal patients, took it without the smallest benefit; but it presently wrought a cure in the only case of chorea, to which it was applied. In rheumatism it proved totally inert, but there is some ground for supposing it possessed of anthelmintic quali-



ties. In the proportion of one or two drachms to a pint of water, it has appeared to allay the irritation of the prurigo pudendi and some other cutaneous affections.

From this description of its virtues, we proceed, briefly to notice our author's *method of exhibiting* so potent a remedy. With persons of adult age, he generally began its administration in doses of a single minim, thrice repeated in the course of twenty-four hours; and, provided neither nausea nor giddiness (which are its first sensible effects) nor other inconvenience ensued, he gradually augmented the quantity to two, three, and even to six minims. "Almost any adult (observes Dr. E.) will bear one or two minims, few more than five; three are generally borne and required, and very frequently four. One woman took xvii minims three times a day without inconvenience or benefit: xviii brought on vomiting and giddiness." To the youngest infant may be given a quarter of a minim, (i. e.) half a drop, one minim being nearly two drops. An over-dose will produce vomiting, pain and tightness at the stomach, with fainting; and if the quantity be immoderately large, convulsions and death. The only instance of its fatal effects on the human subject, with which we are acquainted, is recorded in the very interesting trial of Captain Donellan, for the murder of Sir Theodosius Boughton. The body of this unfortunate gentleman had passed too far into a state of putrefaction, to admit of any accurate anatomical deductions. But the effects of laurel water on the inferior orders of animals, as detailed by several physicians produced at that trial, are worthy of an attentive perusal. In some of their experiments, death instantly took place; and, in all, so speedily, as to render the supposition of its being the consequence of previous inflammation in the stomach wholly inadmissible: whilst, on the other hand, the frightful convulsions which this poison, in adequate doses, never failed to excite, clearly prove that its operation is, primarily and principally, on the nervous system. This supposition will go a good way towards explaining the *modus operandi* of the prussic acid, in severe dyspeptic cases. No sooner is it swallowed, than the pain accompanying such states often ceases. From this moment the vitiated secretions show evident signs of amendment, and go on progressively improving, until they are, at length, subdued. Now, as the formation of healthy gastric juices evidently depends on a *regular transmission of nervous influence into the discerning organ*, it may fairly be presumed, that any *deviation* from such *supply* would cause this depravation. If, then, our remedy be supposed to possess the power of correcting all irregularities in the distribution of this subtle

fluid upon the stomachic nerves; or, in other words, of restoring the balance of excitability at this part, we might conclude, a priori, that its operation would be speedy, and its effects just what observation teaches us. Quitting however speculation, we are anxious to fix the minds of our readers upon considerations of much greater importance—actual facts.

Unlike many other powerful agents in medicine, the prussic acid may be taken for an indefinite period, without incurring the hazard of an accumulated operation. But it must be at the same time admitted, that there are constitutions with which it does not seem to agree. The inconvenience, however, in such cases, is only temporary, and by no means of a serious nature. Upon the bowels, it has a slightly constipating effect, and, occasionally, it augments the discharge of urine. It will be borne in the middle and after parts of the day better than at first rising; and, should any feeling of coldness exist in the stomach, it may be advantageously combined with aromatic and bitter infusions.

As the process usually adopted in the preparation of our remedy involves much chymical skill, it will sometimes fall to the lot of practitioners to use a spurious and ineffectual sort. This precaution is the more necessary, as such accident must materially tend to the discredit of a medicine, which, when genuine, will be found to be of great value. We deem it, therefore, incumbent on us, to point out to our readers those indications which, in our opinion, are decisive of its purity.* The fluid should be colourless and perfectly transparent, powerfully emitting the odour, and leaving on the tongue the flavour of bitter almonds. Having been at considerable pains to determine its specific gravity, we can safely assert that at the temperature of 60°, it is to that of distilled water at the same temperature, as .9931 is to 1. Should the liquor appear turbid or deposit any sediment, its genuineness may be suspected. This change diminishes its activity, and is, in all probability, produced by the absorption of oxygen, which converts it from a ternary compound (consisting of hydrogen, carbon, and azote) to a quaternary, which is composed of these elements with the oxygen superadded. We have only further to remark on this topic, that, as the active principle of which we here speak is a gaseous vapour, held in solution by water, easily decomposed by light and driven off by heat, it must be kept in a dark and cool situ-

* At the recommendation of Dr. E. we obtained the medicine at Mr. Garden's the Operative Chymist, 372, Oxford-Street.



ation. The method best adapted for general purposes is an earthen-ware vessel, filled with water, and covered over.

Thus much with regard to the prussic acid. We now proceed to notice the *two remaining sections* of Dr. E.'s volume. The former of these consists of a few cases illustrative of that power, with which the body, in certain morbid conditions, *resists the ordinary influence of remedies*. And, although we are fully sensible of the value of such instances in a pathological point of view, yet we cannot but regard the extreme minuteness with which they are detailed, as quite unnecessary for all practical uses.

The first was a case of spasmodic dyspnoea, in which the paroxysms, though recurring almost daily, were regularly subdued, and at length permanently removed, by prodigious doses of opium. Only sixty drops of the tincture were at first administered, but this proportion, in four days, was increased to 3vi, and in eight, to 3j, with no other effect than that of giving the patient some comfortable sleep.

The second case, was an instance of *insanity*, accompanied by great heat and throbbing of the head, and obvious disorder of the chylopoietic viscera. It was treated with *calomel*, at first, in *eight grain doses*, but afterward in *doses of 3iss*. In six months, *nine ounces* of this potent mineral were actually administered, and that too without originating any other inconvenience, than ordinarily ensues from the regular and moderate use of it; and, although it did not ultimately eradicate the disorder, the proofs of its controlling power were always manifest.

Dr. E. next presents us with five instances of the admissibility of enormous doses of pulvis antimonialis in hemiplegic, convulsive, and other nervous disorders. By some of these individuals, *sixty, seventy, and even eighty, grains* were taken thrice in the course of twenty-four hours, for several successive days, *unattended by any unpleasant symptom, save a slight nausea, or, occasionally, a gentle disposition to vomit*. By this extraordinary fact, Dr. E. thinks the long litigated point, as to the identity of the pulv. antimon. with James's powder, might be decided. For, should a similar administration of the latter substance act with violence in similar cases, this circumstance, he apprehends, would at once prove the diversity of their nature.*

* We are probably much in the dark yet respecting the *extent* to which medicine may be carried with perfect safety. In Italy, where pathology and therapeutics are now cultivated with unequalled zeal, the sulphas ferri is given, with great success, in dropsical affections con-

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The only remaining section of Dr. E.'s work relates to a very interesting subject, (viz.) *the efficacy of opium in the diabetes mellitus*. This important fact, though obscurely hinted at by some preceding writers, was first distinctly noticed by that eminent practitioner, Dr. Darwin. To his testimony of the advantage of such a method, are subsequently added those of Drs. Ferriar and Warren, and Mr. Money, a surgeon of Northampton, now of London. But, to our author it is that we are indebted for any thing like a statistical and satisfactory account of its effects in this disorder. From his statements it is manifest, that the free use of opiates is not only capable of *restraining the enormous secretion* of fluid which takes place in diabetes, but, also, of *divesting it of that saccharine principle*, with which it abounds: and of ultimately restoring it to a condition, in every respect, natural. To effect this desirable purpose, however, it was necessary to administer the medicine in prodigious doses. Sometimes ʒi , at others 3ss , and in one of the detailed cases, not less than ʒiij of solid opium were actually given three times a day, for upwards of a fortnight. At the recital of these facts, some of our readers may perchance be a little startled, but to ourselves, who have repeatedly had occasion to witness the extreme apathy of diabetic patients, both mental and bodily, they are not at all surprising.

It is the remark of certain practical writers, that diabetes mellitus is *always* preceded by a state of urine differing from the healthy, only in respect of quantity. It happening to our author, therefore, to meet with such cases of *increased secretion*, he regarded them as the preludes of that disorder; and accordingly treated them with opiate medicines, to which they readily yielded. It appeared also from the analysis of that able chymist, Dr. Prout, that the urine, in these cases, contained by far too great a proportion of urea. Such considerations, corroborated as they are by the near resemblance of this substance to the saccharine principle, led Dr. E. to the supposition, that the sweetness of diabetic urine is simply the effect of a depravation of its chief saline constituent, the urea. The precise nature of the change, it would be difficult perhaps to determine; but, as the addition of azotic gas to

nected with, or dependent on, inflammatory affections of the serous membranes, and that in doses which we would scarcely credit. They begin with five grains twice or thrice a day, and increase it to one or two drachms for a dose. Instead of augmenting febrile symptoms, it lowers the pulse, increases the urine, and all the secretions and excretions, thus removing the dropsy, and improving the constitution, at the same time. *Ed.*

the elements of which this singular substance is composed, is known to give sugar, the Doctor throws out this merely as a conjecture, whose reasonableness, indeed, appears to us yet further confirmed by the reflection, that in the process of secretion there is ground to believe, that the circulating mass is resolved by the various organs of the body, into its elementary parts; and by them again so combined as to form the different secreted fluids.

Such then, is the brief outline of Dr. E.'s publication, which, though ushered into the world in an humble form, and with a diffidence which ever accompanies true merit, will be found to be a valuable addition to our medical literature. Candour, talent for observation, and accuracy of discrimination, are conspicuous in the work throughout; and what he has advanced on the subject of prussic acid, we have ourselves, in the main, *confirmed and verified* by a pretty extensive scale of experiment.* The first proof we had of its efficacy, (which was indeed the first trial we gave it) was in a case of severe dyspepsy, which had for three months resisted the combined influence of alterative and bitter tonics, and was accompanied by a most violent and continual palpitation of the heart. The instantaneous relief it afforded, at once astonished and delighted us. The pain in the epigastrium ceased, and the troublesome symptoms rapidly declined until they had all (including the alarming action of the heart) in the space of a week, entirely disappeared. And, to pass over many other instances equally convincing, we would, for a moment, direct our reader's attention to the case of a poor man, who had for some years past, at distant intervals, been subject to *convulsive attacks*. He had had three fits the day he visited us, and was actually seized again in our presence. It remained upon him about ten minutes, during which time the arms were agitated upwards and downwards incessantly, the head drawn towards one side, and the muscles of the face violently distorted. He informed us, a painful distention of the epigastrium always warned him of their approach; and that he almost constantly experienced a degree of soreness and fluttering at that part. Thus directed to the stomach as the "*fons et origo*" of his affliction, we prescribed for him the acid three times a day in minim doses. Immediately after the first dose, (which was administered without delay,) the epigastrium was relieved,

* The Editor entrusted the review of this work to a physician in the country, whose public practice at a charitable institution, and private experience qualified him to report practically and usefully on the publication.

and, although a month has now elapsed since we first saw him, the fits have never recurred. For ten days past he has been occupied in his usual employment, and with the exception of a slight uneasiness, once or twice, transiently felt at the stomach, he has remained entirely free from complaint.

These considerations, together with our own experience of its inutility, in inflammatory and structural affections, will not suffer us to withhold from Dr. E. the merit of having ascertained and defined, by a chain of judicious experiments, the more important medicinal qualities of the prussic acid. The forcible manner in which he has demonstrated its operation to be, specifically, on the stomach, has, indeed, suggested to us an application of the remedy, which our author does not seem to have contemplated. We allude to its use in those painful disorders, gout, gravel, and diabetes, which the best modern writers agree in ascribing to derangements in the digestive functions. In a severe calculous case, which recently came under our care, it was given with the decided effect of allaying both vomiting and pain; and we have sanguine hopes its efficacy may also extend to those other "*opprobria medicinæ*," at which we have just hinted. At any rate, we are resolved on omitting no fair opportunity of determining this point, and we trust our brethren in the profession will deem the subject of sufficient interest to institute similar inquiries. From such an investigation much important knowledge, we are persuaded, would result. Perhaps it would disclose to us new paths of research. But, whilst we augur thus favourably, let it not be imagined that we belong to that class of visionaries, who, on the discovery of any valuable medicine, never rest until they have ruined its reputation by proclaiming it a panacea. We are of opinion that the prussic acid will be found possessed of little efficacy except where the stomach is concerned. Many instances of dyspepsia, which spring from depraved hepatic or other chylopoietic secretions, we are aware, will never yield to it. But, whenever the disorder consists in, originates from, or is connected with, derangements in the *gastric functions*, (excepting however those cases in which the structure also of the organ has become morbid) then will the remedy evince its amazing powers. How ample therefore, the sphere of its operation!

VIII.

Observations on the Cheltenham Waters, and the Diseases in which they are recommended. By JAMES M'CABE, M. D. Physician at Cheltenham. To which is annexed, an *Analysis of the Salts and Waters, by several very eminent Chymists.* One Vol. 8vo. 231 pages. Cheltenham, 1820.

Books, like chronometers, differ more from one another in their internal organization, than in their external form and appearance. A handsome time-piece and a half-guinea volume may be quickly constructed of soft and perishable materials; and, they may run or sell to a certain extent; but time shows, in general, that manufactures of slow construction, are of long duration.

It is a very easy thing for a physician to have his name brought before the public, as the author of a work; but he should remember, that one of two things must result from, committing himself to the press—gain or loss of reputation. There is hardly a middle course—for if a work drop still-born from the press—even that is a point lost in the literary game played. Nothing can be more erroneous than the exaggerated advantages which are supposed to result from coming *early* before the public. The man who keeps in the back ground, for years, labouring daily on the materials of his future work, will ultimately shoot far a-head of his impatient neighbour, who comes forward prematurely, with a raw and crude performance that hangs as a dead weight on him for ever afterward, and engenders unfavourable prepossessions against every thing that subsequently issues from the same source. It may appear a paradox to the young medical writer, but it is, nevertheless, strictly true, that 100 copies of a work circulated among, and approved by, the faculty, conduce more to the author's real interests, than a thousand copies bought up and admired by the public, but not possessing the esteem of the profession, who are the legitimate judges of its merits.

This truth is forcibly stated by Horace, and ought to be kept constantly in view, by medical authors in particular.

Sæpe stylum vortas iterum quæ digna legi sint
Scripturus; neque te ut miretur turba labores,
Contentus paucis lectoribus.

We fear that the author could not have resided long enough in Cheltenham to produce a good volume of this size, on the waters of that celebrated place, and the diseases which are there concentrated from all points of the horizon. The task which Dr. McCabe has undertaken, would have been a most

arduous one for a Boisragon or a Christie, so long acquainted with the effects of these waters, and so familiar with the various diseases for which they are prescribed.

The volume before us consists principally of republications from periodical or other works, and of papers containing analysis of, and observations on, the Cheltenham waters. The other portions of the volume appear to us to be excerpted passages, observations, and doctrines, from some modern writings, as Dr. M'Cabe must be internally conscious.

After what we have said, it will hardly be expected that we should dedicate much space to the analysis of a work, the far greater part of whose contents is already familiar to the profession. We shall, therefore, be economical of our readers' patience, and our own time.

The work opens with a typographical sketch of Cheltenham and its vicinity; and although the valley, in which this celebrated resort of invalids is situated, cannot exactly compare with the valley of innocence in Rasselas, yet it would appear not to fall far short of it.

"There are neither swamps nor marshes to infect the air with their pestilential exhalations, and induce intermittent fevers, with their long train of consequences, which ultimately break the constitution; nor cold, nor piercing winds to drive the blood from the surface, to the internal and vital organs, and occasion colds, catarrhs, and inflammations, which, in the variable climate of England, are too frequently followed by pulmonary consumption."

In the "pathology of bilious disorders," we think we could show, that Dr. M'Cabe is not quite original.

"It is a law of the animal economy, that when any one organ, viscus, or part of the system, has been over-excited or stimulated into inordinate action, that a relaxation or collapse of the power of that part should succeed to such an excitement."

Dr. M'Cabe goes on to show that—"the action of the *cutaneous* vessels, and also of the vessels of the *liver*, is increased by the stimulus of heat in warm climates;" and that, "from these causes arise *unequal distributions of blood*, or congestions of it in particular organs;"—that, "after a residence of some time in a warm climate, the vessels of the *surface* of the body, and the vessels of the *liver*, become relaxed and debilitated;" that "the impression of the colder atmosphere of this climate on the surface of the body determines the current of blood to the internal organs, where the relaxed and debilitated state of the vessels of the liver allows congestions to take place in that viscus;" finally, that, "from what has already been stated, we think it will appear, that the exciting causes of bilious diseases occasion an unequal distribu-

tion of blood in the system; and that congestions of it take place in the liver and other organs of digestion, the vessels of these organs having been weakened by previous excitement."

Such is the author's pathology of bilious diseases, and it is not deemed necessary to point out the sources whence he has taken it, almost verbatim.

"That a languid circulation," says our author, "in the liver, and a debilitated state of its vessels, render it unequal to the secretion of bile, we see, in the last stages of yellow fever, of warm climates, where the whole surface of the body becomes of a saffron hue, in consequence of the *bile* being carried into the system, the relaxed and debilitated vessels of the liver being incapable of performing the office of secretion." 32.

In the first place, Dr. McCabe ought to have known, that it is very far from being proved, that the yellow suffusion, in the fever alluded to, is owing to bile; and, in the second place, how comes *bile*, (a *secreted* fluid) to be carried into the system because the vessels of the liver are incapable of *secreting* it? Dr. McCabe must know that no such fluid as bile exists in the blood, anterior to its being secreted in the liver—yet he makes *non-secretion* of it the cause of its suffusion on the surface.

When speaking of another pathological phenomenon, Dr. McCabe takes up an authority on tropical diseases, no less than that of—Mr. FAITHORN, "whose opinion on the subject must consequently be entitled to *considerable respect*." Those of the *profession*, who have taken the trouble of looking into Mr. Faithorn's book, will not have a very high opinion of Dr. McCabe's penetration in quoting it.

Dr. McCabe's therapeutics, in biliary derangements, will not detain us long. "The object in attempting their cure must be to equallize the general circulation; to remove local and organic congestions, and restore action to the vessels debilitated by previous excitement."

"To carry into effect the above-mentioned indications of cure, medicine affords two powerful remedies—mercury and Cheltenham waters. These remedies combined, with a proper regimen, will rarely fail, unless where the disease has proceeded so far as to occasion a destruction of organization. Mercury possesses, in an eminent degree, the power of equallizing the general circulation by stimulating the extreme vessels, and thus relieving the congestions of the venous trunks, and vessels of the internal organs, while the saline ingredients contained in the waters afford a gentle, but effective, stimulus to the whole of the alimentary system." 45.

We shall not enter into Dr. McCabe's etiology, pathology, and treatment of nervous diseases, gout, apoplexy, &c. They are compiled without acknowledgment.

ANALYSIS OF THE CHELTENHAM WATERS.

WE have never considered the analysis of mineral springs as of very material practical consequence, since, it is well known, that their effects are not at all similar to those of an artificial combination of the same ingredients. Their virtues have been, and must always be found out by experience, while their real composition is, after all, but imperfectly ascertained. Dr. Murray has proved, or nearly so, that the solid contents of mineral waters, procured by evaporation, are rarely the same that previously existed in solution. In the course of the analysis, "original combinations are subverted by the attraction of other forces, and new combinations take place, to be again subverted by other affinities, at the different stages or periods of the evaporation." 55.

For the detail of the analysis of the Cheltenham waters, we must refer our readers to the accounts published in the *Journal of Science*, to Dr. Jameson's *Treatise on Cheltenham Waters*, to Dr. Mackenzie's late work on *Mineral Waters*, to Dr. Scudamore's work, or to Dr. McCabe's itself. It appears, that the Rev. Dr. Cooke has discovered sulphat of potash in the Cheltenham waters—a salt which had escaped the notice of former experimenters.

Dr. McCabe may possibly be offended at the freedom with which we have stated some of our opinions. But if he will just wait for six months, and then candidly examine the justice or injustice of our remarks, after he shall have reflected coolly on all the circumstances, we are strongly disposed to think that he will acknowledge us to be his best friends, in restraining, by timely and honest advice, a dangerous precipitancy towards authorship, into which he is running. Were Dr. McCabe our son or brother, we would give the same counsel, and that with the view of serving his best interests. We shall be the first to give publicity, and to do justice to his promised work on another subject.

 IX.

A practical Treatise on the Diseases of the Eye. By JOHN VETCH, M. D. F. R. S. E. Member of the Royal Medical Society of Edinburgh, and the Medico-Chirurgical Society of London; lately Physician to the Forces, and principal Medical Officer to the Ophthalmia Military Hospital. Three plates, 268 pages. London, November, 1820.

THE early authors of the Greek School, the Romans and the Asiatic Arabians, considered ophthalmic diseases as a consti-



tuent part of medical science, and the accuracy and minuteness of their descriptions testify their knowledge of all that pertains to them. Celsus, indeed, was of opinion that the same person might excel in the practice of both branches of the profession; and he considered him most deserving of praise, who understood the greatest number of diseases.

"Ego eundem quidem hominem posse omnia ista præstare concipio: atque, ubi se diviserunt, eum laudo, qui *quæ plurimum percipit.*" *A. C. Celsus de Medicinâ, p. 406.*

It was not, however, until the final erection of surgery into a separate department, that we find diseases of the eyes selected as a distinct branch of medical education. This appears to have commenced under the Arabians of Spain; and in Germany and Italy the science of ophthalmology has continued to constitute a part of medical instruction. To these countries we are indebted for a great share of the impulse now given to the subject here; but our thanks are chiefly due to Mr. Wardrop and the late Mr. Saunders, for originating attempts to blend the knowledge and practice of the oculist with the surgical art. Other surgeons are now taking up the subject, in imitation of the continental practitioners, charitable institutions are formed and forming for the relief of those afflicted with diseases of the eye, and in a short time we shall become as eminent in the knowledge of ophthalmic as of other branches of surgery.

To a work so strictly practical, the result of long and extensive experience, analysis, of course, is peculiarly applicable, and we hope, by the following *precis* of its contents, to show good cause why every practitioner, who has the means, should possess himself of so valuable a contribution to ophthalmic science. Our readers will therefore remember that, though not always speaking the language, we are always delivering the sentiments of our experienced author, in the following analytical delineation.

The work before us opens with observations on the *general character and treatment of ophthalmic inflammation.*

The conjunctiva is little else than a congeries of lymphatic veins, leading from the circumference of the cornea to the duplicature of the membrane, by which the serous portion of the blood is returned from the internal parts of the eye into the general circulation. Hence inflammation of this membrane partakes more of a venous, than arterial action. The sclerotic coat, on the contrary, being supplied with blood from the ophthalmic artery, a branch of the internal carotid, when inflamed, exhibits all the marks of strict arterial action.

Inflammation and its consequences do not take place in the cornea, until inflammatory action has been set up in the vessels of the sclerotic coat, even when the exciting cause is applied directly to the substance of the cornea.

Iritis, or inflammation of the iris, is to be considered as a distinct form of sclerotic inflammation, connected with some idiosyncrasy, or morbid diathesis, previously existing in the constitution. Before any degree of acute inflammation can establish itself either in the cornea or in the iris, a similar action must have taken place in the sclerotic coat.

Inflammation of the sclerotic coat is slow in its progress. It appears at the circumference of the cornea, forming a zone around it. Intolerance of light attends it. These circumstances distinguish this from conjunctival ophthalmia. Other peculiarities are also present in the former, when arterial action runs high: as the discharge of albuminous matter and the formation of chemosis. In the advanced stage of sclerotic inflammation pus is discharged, having a specific property.

In the treatment of conjunctive inflammation, when venesection is employed, it must be carried to the extent of producing syncope, by opening a large vein on the arm or neck. A sudden collapse of the vessels is thus produced, which will often prove the cure of the disease, as we have repeatedly seen. This salutary effect of syncope can only be ascribed to the laxity of the vessels, which renders them unable to recover their former excitement.

Local bleeding by cupping and leeches has generally sufficient control over sclerotic inflammation, to render any larger discharge of blood unnecessary. An advantageous situation for the application of leeches is the conjunctival lining of the inferior palpebra, and great benefit may be derived from applying them to the septum nasi.

The exclusion of light is often more detrimental than useful, particularly by confining heated air, and preventing the access of a more temperate atmosphere.

All washes and eye-glasses are for the most part worse than useless. The only proper mode of directing such applications is to inject the fluid over the whole surface of the extended eye-lids by an elastic gum-syringe.

Blisters, when applied to the temples, never fail to prove injurious, by increasing the action of the arterial trunks, over which they are placed. In cases of purulent ophthalmia, Dr. Vetch has observed some relief from the application of blisters to the external surface of the palpebræ.

While combating the force of the general inflammation, the important structure of the iris may be secured from in-

jury by the employment of narcotics; as hyoscyamus, belladonna, and stramonium. These may also be used as a mechanical force in detaching any recent adhesions. The argenti nitras may often be applied as an excellent sedative.

For the purpose of altering the violent and purulent state of the conjunctive membrane, it is impossible to possess a medicine of greater efficacy than the liquor plumbi sub acetatis, infused in an undiluted state. Nicotiana, as a narcotic and astringent, applied externally, is of singular use in abating both the pain and the excessive tumefaction.

Inflammation is never equally advanced or equally urgent in both eyes at the same time. Our remedial measures must be as vigorous in the one instance as in the other.

The following is a tabular view of the different forms of ophthalmic inflammation, consonant with Dr. Vetch's outline:—

OPHTHALMIA, or CONJUNCTIVAL INFLAMMATION.

Species 1. Catarrhal ophthalmia, or *ophthalmia mitior*. Sporadic, endemic and epidemic: with or without chemosis.

Species 2. Oph. purulenta, or puriform ophthalmia. *Oph. gravior*, the *lippitudo*, *oph. vera*, *oph. humida* of the ancients. *Blephoroblenorrhœa* and *ophthalmoblenorrhœa* of the Germans.

Var. *a*. Ophthalmia of Infants.

b. ————— produced by the infection of ophthalmic virus.

c. ————— by the infection of gonorrhœal virus.

d. ————— by the metastasis of gonorrhœal inflammation.

e. ————— rheumatic, syphilitic and arthritic.

OPHTHALMITIS SCLEROTICA.

Species 1. Idiopathic, or corneal.

2. Irridial, or symptomatic.

We next come to the important subjects of *ophthalmitis sclerotica*; *ulceration of the cornea*; and *opaque cornea*.

The causes of sclerotic ophthalmia are external or internal, general or specific. When it appears after the decline of exanthematous disorders, which are among the internal causes, it has been distinguished by the name of morbillous and variolous ophthalmia. Dr. Vetch divides the sclerotic ophthalmia into *sclerotico-corneal inflammation* and *sclerotico-choroidæal inflammation*. In the former the exciting cause is

mostly external, and the inflammation occupies the external surface; in the latter, the inflammation manifests a rheumatic character, and by its ready extension inwards to the iris is chiefly known as iritis.

The first set of symptoms of the *sclerotic inflammation* are of a generic nature: increased vascularity, morbid sensibility to the impression of light, contraction of the pupil, pain, heat, augmented secretion of the lachrymal fluid, pyrexia.

The vessels, diverging as they come forwards, produce a zone of minute, hair-like vessels, distinguished by their rectilinear direction and their uniform concentration towards the margin of the cornea. Their colour advances from that of a delicate pink, or damask rose, to a deeper hue, and imparts a faint blush to the part immediately surrounding it.

As yet the back part of the eye and the surface of the palpebræ preserve their natural appearance.

When the vessels encroach on the margin of the cornea photophobia (intolerance of light) immediately occurs. In this situation they are considerably darker in colour, and give the cornea a relaxed appearance; and after the inflammation has abated, a loss of transparency is liable to remain. In old age this opacity of the circumference of the cornea often forms a complete ring, and is called *annulus senilis*.

Photophobia and contraction of the pupil, unless when accompanied with more evident signs of iritis, are merely symptomatic of the inflammation of the sclerotica and cornea. When the pupil is much contracted, the lighter or greener shade towards its inner circumference, appears to be the effect of a greater expansion of its fibres. We have known this appearance of the iris deter some surgeons from endeavouring to remove the disease; the sight being considered irrecoverable.

The inflammatory action of the vessels of the cornea has sometimes the effect of depositing lymph in the middle lamina, which has the appearance of pus. It is only in colour that it resembles pus, for it possesses no fluidity.

Treatment of Sclerotic Inflammation.

Our first object is to ascertain the presence of any foreign matter. This may be done by everting the upper eyelid with a blunt probe, or by injecting tepid water or infusion of poppy or mallow over the everted membrane and eye itself, with an elastic gum-syringe.

At all periods of the inflammation Dr. Vetch has found the abstraction of blood from the temple, by means of cupping, to be the best method of subduing the disease. This

operation may be aided by the application of leeches. General bleeding may sometimes be requisite, and antimonials in nauseating doses. Temporal arteriotomy has lately been objected to, and our author remarks, that every advantage may be more safely and more effectually attained by venesection or cupping.

In violent inflammation, where photophobia is urgent, great assistance is gained by the constant application of a solution of opium or hyoscyamus, of a temperature below that of the atmosphere. In slighter attacks more relief will be afforded by the occasional use of hot fomentations, or of the vapour of water and vinegar. So obvious is the tendency of warm poultices and long continued fomentations to effect relief, by accelerating the destruction of the cornea, that Dr. Vetch says,

"I should consider any patient entitled to recover damages, in whom the disease has terminated unfavourably, whenever it has done so under the application of a poultice." P. 40.

Argenti nitras appears to produce some specific change in the state of the vessels of the cornea, and when properly used gives no pain. The vessels leading into the cornea should be barely touched with the caustic formed into a finely pointed pencil. After this let the eye be immediately washed by injecting a little tepid water with an elastic gum-syringe. A solution of the nitrate of silver in different proportions may supply the place of all the other metallic salts; and a convenient vehicle is made with mucilage and oleum ricini for the exhibition of vin. opii, extr. hyoscyami and liq. plumbi subacet.

Dr. Vetch's testimony respecting the evacuation of the aqueous humour, proposed by Mr. Wardrop, goes more to establish the safety than the expediency of the operation.

On the least affection of the iris being perceived, the extract of hyoscyamus should be employed, together with the means of subduing the external inflammation. Other vegetables besides those in use have the property of influencing the action of the iris: as cuphrasia and annagallis arvensis.

After the violence of the disease has been subdued, photophobia with lachrymation and quick pulse may be relieved by digitalis internally administered.

The strictest attention must be paid to diet, and occasional purgatives will be required.

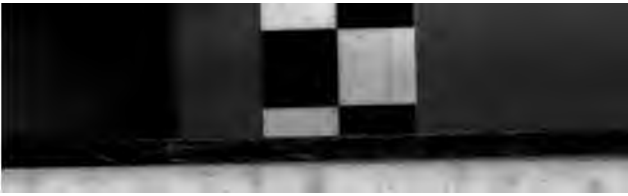
Ulceration of the Cornea.

When this takes place in consequence of purulent ophthalmia, it commences on the external surface, and gradually

deepens and enlarges, till it penetrates the whole thickness of the part. When it is the effect of primary sclerotic ophthalmia, it begins by *apparent* apostemation in the substance of the cornea, whence ulceration proceeds either inwards, so as to terminate in hypopion, or in an external ulcer. In the external tunic of the cornea, ulceration may have the appearance of excoriation or abrasion. Sometimes a papula is observed communicating with a plexus of vessels on the conjunctiva. Small circular herpetic excoriations not unfrequently appear, combined with sub-acute, sclerotic inflammation, and tinea of the tarsi. A hard, white, shining, ragged, irregular crust, is sometimes formed on the denuded surface of the middle lamina. It is long stationary, prevents the march of ulceration into the middle lamina, and leaves no opacity behind; an event which always happens when the middle lamina is the seat of ulceration. When the crust is absorbed by the progress of ulceration, a dusky yellowness, arising from a deposition of lymph, is sometimes discernible beneath. The removal of this crust by artificial means is extremely injudicious.

The yellowish substance found between the laminæ of the cornea, having, as we before observed, the appearance of pus and the nature and properties of lymph, should be removed. If suffered to remain, leucoma will follow. It may be removed in a mass on the point of a lancet or couching needle, or wound round the point of the instrument, if it should have a communication with the side or edge of the ulcer. A bluish appearance follows, from which the part gradually recovers. When all the lymph cannot be removed, slight scarifications assist in throwing it off, and occasion the reproduction of transparent cornea. To prevent a laceration of the serous tunic, the blade of the instrument should be applied almost parallel with the slough.

The moment the ulcer penetrates the inner coat, the aqueous humour escapes; and if the ulcer is within the line of the iris, an immediate approximation of the latter to the opening takes place, constituting procidentia iridis. After the adhesive process has taken place, the inner membrane projects in the form of a vesicle, and when this occupies a large portion of the cornea, it is called staphyloma. The origin and progress of this affection, we believe has never been properly described by any writer before Dr. Vetch. Its resemblance to the head of the mouse-fly has obtained for it the name of myocephalon. The vesicle should not, if possible, be ruptured. Its formation may be prevented by puncturing the cornea at a place as remote as possible from the ulcer. Scarification of the slough, and the application to the ulcer



of a solution of nitrate of silver, infusion of nicotiana, or calomel, may be employed occasionally with advantage. To the incipient staphyloma caustic should be applied, and it will be sufficient that it barely and instantaneously touches the surface. The iris will thus be saved from any permanent adhesion. Scarpa, believing ulcer as the cause of ophthalmia, directs the caustic to be applied, till a slough is produced; but Dr. Vetch's experience leads him to suppose, that such a severe practice would be fatal to the success of the remedy.

The colour of the tumour, when staphyloma is complete, is uniformly blue. When the pain of distention is great, particularly in damp weather, the evacuation of the aqueous humour is often required. The tumour having acquired its full growth, white bands traverse it; but the interstices retain their original tenuity and blueness. These bands are thick, hard, and bleed on being cut, and gradually extend over the whole tumour. While this process is going on, the repeated rupturing of the thin parts diminishes the tumour, which finally subsides, leaving an indelible leucoma over the place which it occupied. An artificial pupil may then be formed. Dr. Vetch objects to the removal of the apex, recommended by Scarpa, and has employed, with success, caustic and the introduction of a seton, in order to accomplish the gradual diminution of the tumour.

The cornea is liable to assume a conical shape without any evident alteration of structure. With a view to improve vision, the aqueous humour has been evacuated, the lens removed, and pressure long continued, to no purpose.

A pellucid dimple, supposed to proceed from interstitial absorption, is liable to appear on the cornea. It is generally stationary, and free from danger; but Dr. V. has seen it, in many cases, become an open ulcer, terminating in proclivencia iridis, after having been preceded by inflammation in the sclerotica.

Opaque Cornea.

After the cessation of conjunctival ophthalmia, the villous elongation of the vessels of the palpebral linings often acquire a farther increase of size, and produce a granulated surface, with a secretion of pus. An inflammatory state of the sclerotic vessels gradually follows. the superficial vessels become varicose, the conjunctiva assumes a dusky and loaded appearance, and the cornea throughout becomes opaque. This opacity of the cornea is generally attended with dark coloured vessels, increasing as they come outwards, and being distinctly varicose. By degrees, the cornea becomes softened, and at length, small sloughs appear on its surface.

This disease seems to arise from a loss of balance in the supplying and returning vessels of the cornea. The diseased structure bleeds profusely, when cut into, and there is a general oozing of pus.

This state of the linings of the palpebræ, termed by the Greek writers trachoma and sycosis, was distinctly described by all ancient authors; but the knowledge of it appears to have been lost until the time of St. Ives, who performed, a hundred years ago, the same kind of service to surgery, which Mr. Saunders lately rendered it.

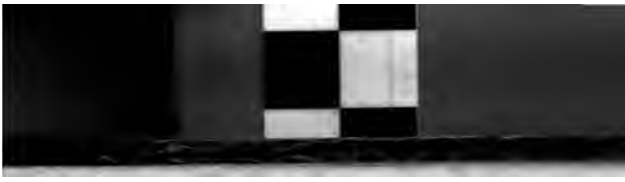
In the treatment of this disease, Dr. Vetch is decidedly, and we think justly, averse to excision.

"The connexion of the disease of the cornea with that of the lids, and the eversion of the latter for treatment or examination, was practised by Mr. Saunders, who taught it to Sir W. Adams, and was resorted to by myself without any knowledge of the practice of Mr. Saunders, or the existence of Sir W. Adams, though I did not then, nor do I at this moment, consider the eversion of the eyelid to be generally necessary to the cure of the disease, its frequent repetition has appeared to me, not only unnecessary, but prejudicial; and I have met with more success by simply raising it with the thumb of the left hand, so as to admit the application of a small porte-crayon, armed with the blue-stone or nitrate of silver, than I ever did by the complete eversion of the palpebræ; nor will I yield the evidence of my own sense and experience on this point, to any conjectural reasoning whatever. The treatment of this complaint forms but one feature of a disease, which, at the time that I met with it, *was new to the profession in this country*, and although the practice proved *successful to the utmost possible degree*, it *has been condemned without inquiry*, and without appeal, and in a quarter where professional discussions cannot be entertained.

"The whole power of high and official patronage has been employed to ensure the success of the operation for removing the granulation of the palpebræ by the knife: the failures have been concealed by every possible subterfuge; nature, however, has proved her superiority, and it is now generally known that the operation, while it has been highly injurious in some cases, *has only proved successful when aided by those applications which it was introduced to supersede*, and this success has been so limited, as to prove that their use is not yet properly understood, where the greatest pretensions have been advanced." Pp. 78, 79, 80.

Blood should be abstracted from the temples by cupping, and when the formation of a slough is apprehended, a leech should be applied to the inner surface of the lower eyelid. Determination of blood to the head should be avoided, and great limitation of diet enforced.

The escharotics above-mentioned, being pointed, and fixed in a porte-crayon, are to be applied with great delicacy, and



in so many points only, as will produce a gradual change in the condition of the part, without the sloughing process. The eyelid seldom requires to be everted. As long as any purulency remains, this plan will be much aided by the daily use of the *liq. plumbi subacet.* When the disease resists these remedies, and the surface becomes hard and warty, Dr. V. has had recourse to a fine powder of *æruugo* or *alumen ust.* applied to the everted surface. These substances must be introduced in minute quantities with a camel's hair-pencil, and carefully washed off before the eyelid is returned. The *kali purum* may be substituted for the other caustics in these obstinate cases.

The third chapter of Dr. Vetch's work is on *ophthalmitis iritica vel sclerotica interna.*

This is a sub-acute ophthalmia, and may be referred to the general character of rheumatic inflammation, as opposed to the phlegmonic form of it. The former has a tendency to injure the structure of the iris and adjoining parts; the latter that of the cornea. The *sclerotica interna* seldom goes beyond the limits of adhesive formation, and this process may originate in the iris, while the redness in the sclerotic coat appears secondary.

The most frequent cause of this form of sclerotic inflammation, is the translation of rheumatism and gout. The pre-disposition may arise from the similarity of structure in the sclerotic coat and the tendinous expansions. Inflammation of this coat, with a disposition to attack the iris, is a frequent occurrence while the system is under the influence of mercury, and the specific efficacy of mercury, in checking the same form of inflammation, being an ascertained fact, there is some difficulty in explaining two such opposite effects. Other parts composed of the white, fibrous tissue are subject to the same effects of mercury. This medicine has the property of increasing the capillary circulation, and, while it is thus operating, if any part be peculiarly exposed to the influence of cold, there is danger of the increased activity of the vessels being suppressed. Then rheumatic inflammation follows. This may happen to the larger joints, to the muscular fibres of any part of the alimentary canal, and we have known it occur in the tendinous expansion of the occipito-frontalis muscle. From analogy, we therefore agree with Dr. Vetch in considering the sclerotic inflammation, occurring during the use of mercury, as a rheumatic inflammation, occasioned by an excited circulation in the capillary system being suddenly suppressed by the application of cold.

Ophthalmitis iritica presents the zone and other general
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appearances we have already described. The pain is of a stabbing or lacerating kind; is increased by warmth, and accompanied by epiphora. Photophobia is not intense, and, as the disease penetrates the iris, it sensibly diminishes. The patient perceives sudden flashes of ignited bodies; and, in bad cases, the sclerotica, losing its spherical form, suffers a partial projection, denominated *staphyloma sclerotica*. The pupil for some time preserves its circular shape; the smaller ring of the iris becomes of a light red colour; the greater ring takes a greenish hue; as the pupil contracts, its margin shows some little irregularities; the pupil itself loses its shining, black appearance; and the inflammation having extended to the capsule of the lens, vision becomes sensibly impaired. The iris swells and presents a convex surface towards the cornea. The pupil becoming more angular, a gray, ash-coloured membrane appears to come forward from behind the border of the iris, which forms a medium of adhesion between its pupillary margin and the capsule of the lens. The sight is more impaired, and at last the eye becomes insensible to light. As the iris approaches, the cornea loses its healthy aspect. At length, one or more small tumours of a dark orange-colour appear on the surface of the iris, which terminate in suppuration. The matter which they contain, falling into the anterior chamber, produces hypopion, and the remains of the cyst are seen floating in the aqueous humour. The inflammation generally terminates in the effects which belong to the adhesive stage. The formation of the adhesive membrane produces the dilated, contracted, and obliterated pupil. A permanent dilatation may be owing to the adhesion of the greater ring of the iris, or to some disease in the choroid coat, or of the membrane lately described by Dr. Jacob, which lies between it and the retina. The pupil is frequently dragged, more or less, from the centre of the eye. The lymphatic membrane, spreading itself over the capsule of the lens, constitutes an important variety of false cataract, which, when viewed through a magnifying glass, appears to be vascular, and terminates in true capsular or lenticular cataract.

When iritis appears during the progress of syphilis, the iris becomes less moveable, the pupil contracts and lies towards the inner angle; the lens and greater ring change colour; the pupil becomes angular, and the iris advances. Photophobia increasing in the evening, and a fixed pain, chiefly in the eyebrow, attend. As the morning approaches, the patient enjoys some repose. Small red, or orange-coloured tumours appear at the pupillary or ciliary margin, and suppurate.

Iritis, with a primary inflammation of the sclerotic coat, is not a very unfrequent effect of gout in irritable subjects. With other premonitory symptoms, the sclerotic appears reddened, and does not propagate its inflammation to the border of the cornea, but, according to the observation of Professor Beer, leaves a narrow, bluish white ring around its edge, which can only be observed in the early stage of the attack; for the space is filled up by the vessels of the conjunctiva, which become varicose. When the sclerotic inflammation is formed, the common appearance of iritis comes on, but the pupil remains in its natural situation. The lymphatic membrane spreads rapidly, and the pupil becomes narrower, and at length closes. Sometimes the lens forms into a green cataract.

Treatment. Repeated cupping in the temples, as long as inflammation may appear in the sclerotic or iris, is necessary for the cure of all these species, and insures the efficacy of other means. A small quantity of mercurial ointment with opium, rubbed into the eyelid and temple night and morning, seems to have a specific agency in arresting the progress of the disease in the iris; the same be said of the local use of stramonium and hyoscyamus. If the disease have occurred during a course of mercury, we may renew its exhibition with safety and advantage. When gastric derangement appears to be connected with rheumatic inflammation, we must try to remove that derangement. In protracted cases of this kind, the operation of an emetic often cuts short the disease in the eye. Dr. Vetch speaks highly of the free use of digitalis, as a powerful auxiliary; and we have repeatedly seen the best effects from a seton in the neck.

CHAPTER IV. is on lenticular and capsular inflammation.

Until very lately, little has been added to our knowledge of the cataract since the days of Celsus and Galen.

The lens is subject to an acute inflammation, which may be called *lentitis*. Cataract exemplifies the adhesive; this the suppurative process. In *lentitis*, the lens gives out aropy matter in extreme cases, which, after traversing the anterior chamber, reaches the external surface through the cornea, without losing its continuity with the lens. The escape of the aqueous humour is, in great measure, prevented by this ropy filament. *Lentitis*, in its common form, does not proceed beyond the adhesive stage.

Cataract is of two kinds: lenticular and capsular. It is hereditary. The lenticular cataract generally exhibits a dark gray colour, with a tinge of yellow, and remains darker at the centre, than at the border of the pupil, even when the

whole has become opaque. This disease is slow, has no influence on the iris, and does not altogether destroy vision. The space of the posterior chamber is distinctly to be seen, and the cloudiness is convex and without spots.

Capsular cataract begins with a few white, shining streaks or spots: its colour is never *uniformly* deep; and it affects the motions of the iris. Opacity of the lens usually soon follows. Capsular cataract may be confined to the anterior or posterior hemisphere, or both may be affected; but the capsulo-lenticular is the most frequent form of the disease, of which there are many varieties. The *cataracta capsulo-lenticularis centralis* in the human subject, is said by Beer to be observable soon after birth, and, sometimes, to remain unaltered during the whole period of life. In the horse, this central speck has an almost uniform tendency to terminate in capsulo-lenticular cataract. We may here take the opportunity of observing that, a white spot is to be seen in a sound eye of this animal, by making the rays of light fall in a particular direction; as by turning his head slightly round in the stall opposite the light.

The *cataracta caps. lentic. siliquata*, is the cataract of infants. It has a light gray colour, and is seen at a considerable distance from the pupil. This recession of the lens is owing to the interstitial absorption, which brings the hemispheres of the crystalloids nearly into contact.

False cataract is of two kinds: the one arising from inflammation, which throws out a pseudo-membrane between the uvea and the lens; and the other proceeding from violent concussion, by which a portion of the tapetum of the uvea is detached, and rests itself upon the anterior capsule.

It is of importance to distinguish the consistence of a cataract. *Hard cataract* is mostly of a dark colour and distant; and the iris is free, and when expanded, vision is tolerably distinct. *Black cataract* resembles amaurosis, but is ascertained by dilating the pupil. *Fluid cataract* is always joined with perfect opacity of the capsule. *Congenital cataract* is always fluid at first. The size of the fluid cataract is generally larger than the natural lens.

Dr. Vetch's account of the complications of cataract is short, but useful and explicit.

Applications to microscopic objects predisposes to cataract, which forms, according to our author, in the eye which is kept shut. Sudden and strong light, especially in infants, produces inflammation, ending in permanent, central opacity, or in cataract. Exposure of the head and eyes to the heat and light of fires has the effect of predisposing to cataract. The fumes arising from the oxydation of metals, dust, the abuse of spirits, predispose to the disease in elderly persons.

Treatment. Generally speaking, the same line of treatment, which has been recommended for iritis, is equally applicable to the early stage of capsular inflammation, and it will be much assisted, as we have found from experience, by the use of setons or issues and rubefacients.

When the operation is requisite, especially if done by absorption, there is no advantage in waiting for the more perfect formation of the cataract, which is often capable of being removed at any stage by breaking up the lens; unless other circumstances should render delay advisable.

The sixth chapter is on *Amaurosis*.

An interrupted vision is one of the first symptoms of this disease. Myopia, presbyopia, diplopia, and strabismus, are also associated with it. Light is sometimes sought for; at others it is painful. When amaurotic blindness is complete, the eye is insensible to light; and this may happen in one or both eyes. Amaurotic amblyopia is sometimes periodical, especially in hysteria and chlorosis. Total blindness is apt to take place in the end. Amaurosis appears in nyctalopia and hemeralopia. The former occurs to horses as well as to the human species; and the latter is sometimes epidemic.—Whether the pupil be dilated or contracted, it no longer obeys the stimulus of light. The pupillary border becomes more or less angular, and the opening looks less clear than that of a sound eye. During the formation of the disease, pain in the eye or in the head, giddiness, and other symptoms of cerebral affection, are present. The middle period of life, and dark eyes, are most liable to amaurosis; and it is distinctly hereditary. Its production is favoured by continued observation of microscopic objects, and by any cause capable of augmenting the quantity of blood in the vessels of the head; by lightning; by violent mental emotions; by a disordered state of the abdominal viscera; by narcotics; by constitutional idiosyncrasy with respect to diet, &c. by the internal use of lead. One form of amaurosis appears to be owing to a deficiency of pigment, and rarely admits of any cure, although it seldom proceeds to absolute blindness. The bottom of the eye appears pale, yellow, and glittering; and when the branches of the central artery become visible, and the iris pale, the eye resembles that of the cat. This species of the disease is met with in old people, and in younger persons after continued fever, in phthisis, and in atrophy.

Amaurotic amblyopia is seldom perfectly cured, excepting when it arises from narcotics. The action of the iris affords no sure criterion respecting the condition of the retina; and when one eye is attacked without any perceptible

cause in the organ itself, the other may be expected to become diseased.

Treatment. Bleeding must be carried to the extent of producing syncope; leeches, purgatives, antimonial emetics, pediluvium, seclusion from the light, cold applications, counter-irritants to the neck and behind the ear, sinapisms to the feet and legs; the reproduction of habitual discharge or cutaneous disease, must also be had recourse to. Dr. V. says, the most advantageous situation for the leeches is the septum nasi. He strongly reprobates the indiscriminate use of Galvanism, and electricity.

The second division of our excellent author's work commences with the subject of *conjunctival inflammation*; and first on *catarrhal inflammation, arising from climate and atmospheric changes*.

Dr. Vetch's observations agree with the testimony of most writers, that a humid state of the atmosphere, combined with a certain degree of heat, is that which proves most productive of ophthalmia.

Catarrhal Ophthalmia.

A catarrhal inflammation of the conjunctiva is seldom met with in England; but Dr. V. has reason to believe that it is by no means unfrequent in Ireland.

The causes of epidemic ophthalmia in northern countries seem to have a less extensive influence than those which favour the production of epidemic catarrh or influenza. The influenza sometimes prevails over whole kingdoms, while epidemic ophthalmia is generally confined to particular districts. Hence Dr. V. is disposed to believe that the latter disease is more frequently conveyed by infection, than generated. At the same time he remarks, that the excessive crowding together of men, as in barracks, will often of itself engender inflammation of the conjunctiva; and render the constitution more disposed to be acted upon by the exciting cause, whether natural or engendered.

The epidemic ophthalmia rarely takes on the purulent action. It commences with stiffness of the eyelids, fulness of the eye, sense of grittiness on the conjunctiva, pricking pain in the lachrymal caruncle. There is either aridity or copious lachrymal discharge, attended with scalding, and mixed with mucus. The lining of the eyelid appears of a mottled, red colour. The conjunctiva is generally covered with patches of large vessels, and the chemosis is transparent and often partial. About the fifth day these symptoms de-

cline, and the mucous discharge increases. In some cases suppurative inflammation follows, imparting to the conjunctiva a fleshy and villous appearance, with a greater degree of chemosis, and with distention of the cornea.

Treatment. Stimulants put a stop to the progress of this inflammation, by carrying the excitement of the vessels beyond the action of the disease. Spirits, vinegar, snuff, &c. when applied externally, have this effect; and a stimulating ointment at night, with the daily use of a solution of sulphate of zinc, are in most cases sufficient. In individual instances of catarrhal ophthalmia, a violent inflammation without purulency will often require a decisive use of the lancet.

We now come to an important and melancholy subject, the *purulent ophthalmia of the British army*.

When this disease prevails extensively, two forms of it are produced; the one from the impression of atmospherical causes, and the other from infection. Dr. Vetch informs us that the puriform discharge from the conjunctiva, arising from whatever causes, operates as an animal virus, when applied to a healthy eye; and the disease proceeding from this source is by far the more violent and malignant of the two. The continuance of purulent ophthalmia in the English and French armies after their return home, and the repeated occurrence of it in the troops of this country, are striking proofs of its contagious nature. Dr. Edmonstone first made the public acquainted with its contagious nature, and in 1807 Dr. Vetch first established the fact, that the disease, as it appeared in this country, was *exclusively* produced by the application of the morbid secretion. A humid atmosphere has the effect of aggravating the symptoms; and for months or years after an attack, the eye is found to be influenced by atmospherical vicissitudes.

Our author presents us with a general view of the introduction, progress, and decline of the purulent ophthalmia in the British army; from which it appears that the disease was kept up by confining the soldiers to barracks, many of them in marshy situations, and by a new and fatiguing system of drill which was then in full operation. On the contrary,

“The French army, after its return from Egypt, instead of being confined to barracks, and harassed by a fastidious discipline, proceeded from conquest to conquest, bivouacking in the field, or quartered on the inhabitants of the countries which they subdued. The means therefore of disseminating the infection, if it existed, did not occur to the same extent.” P. 187.

The smallest quantity of virus will produce the disease

which sometimes follows in less than twelve hours ; and the same person may again receive the infection. Both the eyes are generally attacked. A mottled appearance and then a fleshy redness are observable in the lining of the lower eyelid. From this situation the inflammation spreads rapidly over the whole of the conjunctive membrane, as far as the cornea. This is seldom accompanied with any other sensation than a stiffness, or such a feeling as would arise from sand rolling in the eye. These sensations proceed from the turgid vessels. Chemosis, bounded by the cornea, more or less complete, succeeds, together with œdema of the palpebræ, and inversion of the eyelids. Pus now flows in a continued stream, and attacks of severe pain commence in the eye. The pain is often intermittent and migratory, and sooner or later is succeeded by a sense of rupture of the cornea, and a gush of scalding water. The pulse is unaffected, unless the lancet has been freely employed, and the health is unimpaired ; but sleep is absent. At length the external tumefaction subsides, and a gaping appearance of the eye presents itself. The cilia are everted and distant, and the eyelids cannot reassume their natural state in consequence of the granulated state of the conjunctiva which lines them, and which is protruded more or less. The fluid discharged is the aqueous humour, which is secreted in great abundance. The ulcer in the cornea is sometimes followed by staphyloma ; and in some cases, the lens has presented itself at the orifice ; but as soon as the capsule has given way, the lens and part of the vitreous humour have escaped. This destruction of the globe of the eye, for the most part, as in horses, insures the safety of the other. When one eye is lost by staphyloma, and the other remains useful, it is well to lay the sac open, and extract the lens.

Treatment. The liquor plumbi subacet. in its undiluted state is the application which Dr. Vetch recommends as the most efficacious. Its employment is followed by a sensation resembling that which arises from sand in the eye, and by copious lachrymation.

Venesection is another powerful expedient. In our general remarks on ophthalmy, we pointed out the necessity of inducing syncope, when the conjunctiva is the seat of inflammation ; and have infinite satisfaction in confirming Dr. Vetch's testimony of the excellence of this practice, which we have found invariably successful. It is not sufficient that the vessels become pale : an actual deliquium animi must be produced, otherwise the vessels will recover their former activity, and the disease advance.

A free exposure to, and frequent change of, air are serviceable.

After Dr. V. had published his former work, he was induced to try the effect of various narcotics in this disease: and found that nicotiana possessed the properties of acting as an astringent, and of diminishing the œdema of the palpebræ. It has also the effect of relieving the pain and perpetual watchfulness. It should be applied at bed-time in form of infusion, in the proportion of two drachms to eight ounces of water. An infusion of galls and opium may be substituted for the former.

When active measures have been neglected in the beginning, it may be advantageous to employ local bleeding, which must be regulated in great measure by the pain; and, when the discharge continues acrid, blisters on the neck and behind the ears prove serviceable.

For the purpose of supporting nausea, Dr. V. employs an infusion of nicotiana. This, however, it must be recollected, is only a measure of secondary importance.

Where venesection has failed to produce syncope, and the pain indicates that distention is going on: the external swelling being so far reduced, as to expose the cornea; the operation of puncturing the cornea may be had recourse to, and repeated, if necessary. A frequent repetition of this operation, it should be remembered, generally occasions a partial adhesion of the iris.

As long as the lower eyelid has internally a red and villous appearance, there will be danger of a relapse, from exposure to cold or other exciting causes.

Eversion of the eyelids or ectropion, following Egyptian ophthalmia, is attended with great tumefaction and a granulated state of the protruded part. It is occasioned by the action of the orbicularis muscle, after the external œdema of the eyelids begins to subside. The tumour is the effect of strangulation, and the hypersarcosis belongs only to the surface. Instead of cutting away the granulated surface day after day, as was formerly the practice, the everted portion is to be exposed to a light and careful application of argenti nitras, and to be returned and secured in its place with a compress and straps of plaster or bandage. Every time the eye is cleaned, this process is to be repeated; and Dr. V. says,

“In the course of a few days, the tendency to protrude will disappear, and at the end of a fortnight the patient will have so far recovered the use of the muscles of the part, as to be able, by their means alone, to raise open the eyelids at pleasure.” P. 229.

Gonorrhæal Ophthalmia.

Of this disease there appear to be two varieties: one depending upon a constitutional communication of the diseased action in the urethra, and another arising from the application, of the gonorrhæal virus. The inflammation in the former is of the rheumatic kind. In external appearance it differs chiefly from the other, by the œdema being principally confined to the conjunctiva, where it is attached to the eye, producing chemosis; so that the eye is seldom concealed. The discharge is less, is of a more viscid consistence, and deeper yellow colour. There is more photophobia, and a greater tendency to attack the internal parts, and to destroy the cornea with slough or ulceration. In the treatment of this form of the disease, the free use of cold applications is best suited to promote a cure. Poultices are highly improper, and general bleeding is not so efficacious as in those cases proceeding from inoculation.

The treatment of gonorrhæal ophthalmia, arising from the latter source, may be successfully conducted on the same plan, which has been laid down for the cure of Egyptian ophthalmia.

Purulent Ophthalmia of Infants.

Dr. Vetch's description of this disease is so accurate, that we shall give it in his own words.

"At first, the discharge is thin and whitish, afterward, it becomes thicker and yellow; it collects in considerable quantities, and when the eyelids are forced open, it springs out with great force; occasionally it is mixed with blood. When the œdema ceases, the inner surface of the palpebræ becomes sarcomatous, and this diseased surface, when the eyelids are opened, forms an exterior fleshy circle, beyond which the relaxed conjunctiva of the eye comes forward as a second; and often the caruncula lachrymalis adds still further to the valvular appearance, which the part presents. P. 258.

Treatment. Leeches may be safely applied during the whole course of the complaint. When the tumefaction begins, a good effect will be experienced by inserting a small portion of an ointment composed of any animal fat, without wax, six drachms, and of hyd. nitrico-oxydum, ten grains. As the purulency advances, the liq. plumbi subacet. will be found as useful as in other instances of purulent ophthalmia. To assist the separation of the slough, a solution of the argenti nitras is serviceable. The recovery of the relaxed conjunctiva may be further aided by dropping, or injecting into the eye a solution of alumen, or of cupri sulphas.

We have seldom found any other application necessary, than the liq. zinci sulphatis, injected with a syringe from the outer corner of the eye.

The plates accompanying this volume are not so well executed as we could have wished. We wish we could speak more favourably of the typographer. As, however, the work will be sure to pass through many editions, the printer will have an opportunity of recovering his credit, especially, if the author will take pains in carefully correcting the press.

We have seldom had an opportunity of perusing a book so replete with pathological science, and exhibiting such excellent and decided rules of practice, as the one before us. Dr. Vetch does not appear to write for the sake of spreading his name abroad, as is too much the fashion of the present day; but to establish facts, and to extend a correct knowledge of ophthalmic diseases, with the view of promoting civil and military hygiene. His close attention to the phenomena of the purulent and gonorrhœal ophthalmia, is deserving of the highest praise; and his former appointment to the Military Ophthalmic Hospital, was a proof of merit, which we hope to see acknowledged with a more substantial reward. This treatise on the diseases of the eye should not only be read by the professed oculist, but most diligently studied by the physician, surgeon, and general practitioner.

X.

A Dissertation on the Disorder of Death; or that state of the Frame under the Signs of Death, called "Suspended Animation," to which Remedies have been sometimes successfully applied, as in other Disorders; in which it is recommended, that the same Remedies of the Resuscitative Process should be applied to Cases of Natural Death, as they are to Cases of Violent Death, Drowning, &c. By the Reverend WALTER WHITER, Rector of Hardingham, Norfolk, and late Fellow of Clare Hall, Cambridge. One vol. 8vo, pp. 480. London, 1819.

"Death may usurp on nature many hours,
"And yet the fire of life kindle again
"The o'erpressed spirits."

Pericles.

WHATEVER difference of opinion may exist among philosophers, metaphysicians, and divines, respecting man's probable destiny hereafter, all seem agreed that he is placed here

for some wise purpose, whether finite or probationary; and that whatever suddenly arrests or slowly curtails the natural range of his existence, is an evil of the greatest magnitude, and one that is to be obviated by all possible means. Sudden death is not only so revolting to human nature, but so shocking and distressing to surrounding relatives, that Heaven has kindly ordained the remembrance of it to be transitory—unless where its consequences entail lasting misery on the survivors, and too indelibly engrave it on the tablets of their memory. It must be confessed, that all our investigations into the nature of life—that being which we are so anxious to preserve, and so unwilling to resign, have ended in disappointment, or only portrayed to us the extent of our ignorance, and the futility of the pursuit. That great secret of our Creator yet mocks our speculations—eludes our search—and, like the rainbow or horizon, “still as we follow, flies.”

“We are amazed and confounded” says the learned and zealous writer of the work before us, “when we contemplate the union of thought, or even of motion and sensation, with organized matter in the functions of animal life; and our amazement ought still perhaps to be increased, when we meditate on that condition of the frame, in which this union appears at once to be dissolved, and the action of the vital principle is visible no more.” P. 2.

It is but too well known, that we have no definite criterion (anterior to putrefaction) between animation *suspended*, (consequently within the possible range of revival) and animation *extinct*. Modern experience has exhibited extraordinary facts, which have overturned, in many cases, the conceptions of all preceding times, on the subject of life and death;—and they may suggest to us, that other cases of erroneous, or perhaps pernicious opinions, are still in too general operation. We live in an æra when, without a miracle, the *dead* have been raised to *life* and all the blessings of existence. We have ascertained that motion and sensation are *not* necessary indications of the presence of vitality—and, finally, that “the powers of *life* may remain, though the signs of *death*, according to all former notions on the subject, may be unequivocally apparent.” The most successful and brilliant proofs of this fact have been exhibited by the Humane Societies—proofs which have overturned the *experience*, as it has been called, of all former ages, in every region of the globe.

“It is now acknowledged, that the most illustrious sages in the art of medicine and the grossest of the people, in all former times, have gazed with the same eye of fatal and unsuspecting ignorance on various appearances of *Death*; and that they have committed their fellow creatures to the grave, who were still instinct with the prin-



ciples of *Life*, and possessed even with the powers of a sound and healthy frame, ready at once to resume in all its former vigour, the various offices of motion—sensation—and reflection.” 9.

This brings us to make a few observations on the work before us and its author. We think we may safely conclude, that the great body of the profession, like ourselves, have hitherto been prepossessed against, or rather careless about, the work in question ; partly from the nature of the title page, and partly from the extra-professional character of its author. We were lately induced to peruse the publication, by the recommendation of some friends, and in it we found much to interest our feelings—much to amuse our minds—and much to improve our understanding even in a professional point of view. Mr. Whiter has been unfortunate—we had almost said, injudicious, in two things—first, in refining, we humbly conceive unnecessarily, on what is commonly understood, in the profession, by the term “suspended animation,” and giving it the uncouth appellation—“disorder of death,” which, after all, means neither more nor less than that state of apparent death within the possible range of reanimation—in plain terms—“suspended animation.” It is true that our author has clearly and unequivocally explained his meaning ; but then it is at the expense of reading several pages—an expense that can be worse spared than money in this biblical age, when nearly as many books issue from the press, as human beings from the wombs of their mothers. The greater misfortune is, the general prolixity in which Mr. Whiter has indulged—evidently with the laudable *motive* of impressing more strongly his reader’s mind with the importance of the subject, and the justice of his cause ; but, we fear, too often with the *effect* of weakening the one, and rendering suspected the other. There is, moreover, no doubt in our minds, that our author has, unintentionally, exaggerated the extent of the evil which he laments, and formed too sanguine expectations of the remedy which he would apply. Still there is a vast deal of good sense, humane feeling, and sound reasoning, throughout the work—and quite enough to repay the labour of perusal.

We cannot follow Mr. Whiter through his long chain of argumentative reasoning ; but rather endeavour to show its tendency or purport. Our ingenious author thinks that the experience of the Royal Humane Societies has not supplied us with any new principles by which we can infallibly decide on the irrecoverable annihilation of the vital powers. On the contrary, it appears, “that the only evidence respecting the total extinction of life, is to be found in that mode of decision to which they have themselves resorted in those

peculiar instances which they have undertaken to examine." As this evidence consists in actual experiment, nothing, he thinks, but the ineffectual trial of the resuscitative process can authorize us to pronounce the sentence of *absolute and irremediable* death.

The "disorder of death," or suspension of the vital powers and processes, is the most terrific of all disorders, "as it almost invariably terminates in final and putrefactive dissolution," *where no remedies are applied to its relief*. And here our author very forcibly draws our attention to the fact that, although the transactions of Humane Societies directly conduct the understanding to the above melancholy inference, yet a conclusion so obvious has had no operative effect either on the minds of these societies, or on the opinions of the public to whom they have appealed.

"The truth which they have established, remains an insulated fact, and confined within the narrow limits of the particular cases, by which it has been proved. It has not been adopted as the basis of a general conclusion, nor has it operated on the customs and institutions of mankind. In vain have these societies demonstrated to the most perfect satisfaction of themselves and the public, that the absence of apparent motion and sensation affords *no criterion whatever* of the annihilation of life. The artists who have exhibited the most numerous and brilliant proofs of this truth, and the people, who have been convinced by the demonstration, still continue to regulate their ordinary practice by a maxim directly opposite, just as if no such societies had existed, and no such truth had been established. The absence of *apparent motion and sensation* still continues in these times as in all the past, to be regarded in our ordinary practice as an *infallible criterion of the annihilation of life*; and on this conclusion at this moment, through the whole extent of the globe, we consign our fellow creatures to their graves, without reflection or remorse." 13.

If this suspension of vitality, or, "disorder of death," then, has been sometimes cured by the resources of art, the question is, whether we should not, *in all other cases*, (as well as in those of drowning or sudden death) employ the resuscitative process? Our author answers decidedly in the affirmative.

"It is the purpose of this treatise to urge in the most strong and unqualified terms, that the process of attempting to revive suspended animation, which has been adopted only under particular accidents, should be applied to *all cases of death, under all circumstances, and upon all occasions*." 34.

In the next page our author qualifies, in some degree, the extent of this principle, by stating that he means by "*all circumstances and all occasions*," only to propose "that the remedies should be as *universally* applied in this disorder.

as they are in all other diseases, by which the frame may be attacked."

The professional reader, especially the practical physician, acquainted with the discoveries of modern pathology, will strongly object even to this limited application of the principle in question. A man dies, worn to a skeleton, with hectic fever, and purulent expectoration. The attendant medical practitioner thinks it his duty, no doubt, to administer remedies till the last—not with the hope of cure, but as palliative of distressing symptoms. Or a man dies with all the characters of some great internal aneurism. Who would think of attempting the resuscitative process in these and hundreds of other cases, where vitality ceases in consequence of organic changes in important viscera. Indeed, the author himself, a little further on, narrows his principle still further, and obviates substantially the objection which lies against his first broad and sweeping proposition.

"His projects are not designed to recall the principle of vitality, when it is *altogether* decayed or exhausted, but to *revive and retain its power*, while it remains surrounded by the materials, either sound or not violently impaired, which are the instruments of its action." 36.

While it unfortunately happens, in by far the greater number of fatal cases, that some part of the material fabric is seriously impaired; still we must bear in mind how frequently we see the thread of life, suddenly and unexpectedly, snapped, when no warning symptom appeared *before*, nor necessarily fatal disorganization *after*, death. How often, for instance, during convalescence from grave, acute diseases do we, with surprise, learn the sudden death of our patient; and, after a strict *post mortem* examination, discover not a trace of organic lesion, beyond perhaps, some turgidity of vessels that might or might not have any thing to do with the unexpected arrest of vitality. How are we certain that in such circumstances, the resuscitative process promptly applied, might not have re-kindled the vital spark?—It is to this class of sudden and *unexpected* deaths, during and subsequent to other diseases, as well as to accidents in health, that we think the force of Mr. Whiter's arguments is mainly applicable: and he will, in future ages, be deemed no mean benefactor to the human race, if his work shall succeed in rousing the attention of the medical community to this interesting question, and their efforts shall be afterward crowned with even a very small portion of that success which his wishes may anticipate.

There is much to be said in favour of the attempt, and little or nothing against it.

"In this project, the activity of our zeal does not commence till the extremity of the evil belonging to the case has been incurred, and when that period is arrived at which no danger is to be feared from the theories of the enthusiast, or the practices of the credulous." 45.

The fear of premature interment, has often prevailed, almost epidemically, in this and other countries, founded on the histories, some true, but most of them false, of spontaneous re-animation. It is strange, however, as our author has hinted in various places, that this dread of revival in the *grave*, or hope of such an event before interment, should not have led to the employment of some means to effect resuscitation, si lateat scintillula forsan, and thus obviate the chance of horribly awaking in the grave! The fact is, that the survivors leave the apparent or real corpse to slowly change into putrefaction, without giving nature the slightest assistance in resisting this process, or reviving the smothered spark of vitality—if a spark should remain.

"The possibility of latent life which they acknowledge, does not fill their minds, as I observed, with hope, but with horror:—it does not suggest conceptions or devices for the recovery of that life, but it inspires them with the desperate project of preventing such a recovery by its absolute annihilation. Their terrors are not appeased till they have *killed* the object in whom they suspect this fearful property of life to be still lurking; nor are their minds composed till they have made assurance doubly sure, and converted doubtful apparent death into certain—unequivocal putrefactive death, in which every spark of latent life is for ever extinguished without the possibility of recovery, or recall." 65.

Such is the picture which our author has drawn of *protracted* interment; but the hurried inhumations practised by some nations, and particularly the Jews, who, we believe, bury their dead on the same day they die, has excited Mr. Whiter's imagination to a degree that has, we fear, somewhat obscured his judgment. Instead of considering the grave as the cold receptacle of our mortal remains, that quickly must extinguish any lingering ember of vitality, Mr. Whiter looks upon it in quite another light—"as the warm genial spot of earth endowed with every property most propitious to the process of resuscitation,"—and that, upon no less authority than one of our "PROFESSIONAL SAGES," the M. D. i. e. Dealer in Medicine Chests, of SOUTHCOAT memory, who "has conceived that *precious property* of the ground under a point of view which induces him to communicate this truth to the public, as an *article* of the most alarming intelligence. He warns the incautious world not to trust the corpse too soon within the *restorative and balmy*



precincts of the grave, lest perchance it should recover in a spot which, under his mode of conception, becomes a portentous scene of horrible efficacy in the process of reanimating the dead." 67. Mr. Whiter is not, perhaps, aware that, in the multifarious writings of the Southcoat "sage," nominal, anonymous, and pseudonymous, there are more absurdities than sentences—more falsehoods in every page of his spurious productions, than hieroglyphics round the walls of this vender of rhatany root, medicine chests, and calumnies. Mr. Whiter is therefore to be pitied and excused for this unfortunate citation, which, without many redeeming qualities, would ruin his work.* We do not consider it necessary to make any comments on this part of our author's work, as the subject is not likely to be productive of any advantage. That the inhumation of our fellow-creatures, before the vital heat has had time to leave the body, is to be censured and condemned, no one will deny; but that the earth, thrown up out of the grave, and lowered to the temperature of all surrounding bodies, should, when thrown in on a corpse, defended by shroud, coffin, and cover, have any *balmy* or *restorative* effect, can be entertained only by a man who believed in the advent of a young Shiloh, from the dropsical ovaries of Johanna Southcoat, as announced by the ventral rumblings of that flatulent old woman.

We must pass over that division of Mr. Whiter's work which treats on the "sleep of death, and the death of sleep," though it contains a vast store of curious matter, ingenious reflections, and learned researches. This section, indeed, will be found extremely amusing to all classes of society; but it is quite incapable of analysis.

A considerable portion of the publication under review, is dedicated to "remarks on the treatment of the dying and the dead;" and from this portion we shall extract some matter that may not prove uninteresting to our readers, especially as it proposes—"a new source of comfort for the attainment of a blessing, which is considered as the last good of our earthly condition—the blessing of *Euthanasia*."

*For the honour of the Profession we do not know a single medical writer who has condescended to mention this vile excrescence on the noble tree of science, excepting with horror and detestation. The whole course of our reading, and the whole circle of our acquaintance round this terraqueous globe, have not furnished us with a character so truly despicable, as the above-mentioned disgrace to the very name of science or literature. Fortunately, as an *author*, he is out of the pale of even the lowest circle of the Profession. As a *man* we know him not.



With Dr. Ferriar, our author reprobates some of the monstrous customs of nurses and undertakers—for instance, the dragging of the bed from under dying persons, and the placing them on a mattress—pulling pillows and bolsters from below their heads—stopping up the inlets of breath, and the outlets of excretions—binding the breast and arms round with a bandage—stripping the body in cold weather, and laying it out in little more than half an hour after sudden death—all of which Dr. Ferriar, and of course, our author, think the helpless patient may be sensible of, though incapable of expressing his sensations distinctly. Our author finds fault with Dr. Ferriar for supposing that after twelve hours of *apparent* death there is little chance of reanimation, lest perchance “the consciousness should be extended beyond this period.” We really are completely sceptical as to this *consciousness* during the absence of every external phenomenon of vitality. Can there possibly be consciousness after the heart and lungs have ceased to perform their office, even for a few minutes? Mr. Whiter censures, with more justice, the direction of Dr. Ferriar to draw the curtains nearly close round the bed of the dying man when the rattling noise of respiration and difficulty of swallowing have come on.

Here, as in many other places, Mr. Whiter reflects on the conduct of the medical profession in abandoning the patient as soon as he is apparently dead, instead of trying resuscitative means; but these reflections grow out of the erroneous or extravagant extent to which our author appears inclined to carry his theory—identifying cases of natural death with those from sudden arrests of life in the midst of health. But here lies the whole difference. In the *latter* cases, means of resuscitation ought undoubtedly to be used; but to extend these means to the *former* class would not, indeed, prove a cruelty to the dead—but a source of torturing suspense to the feelings of the relatives, without, we fear, being in any instance, productive of ultimate success. Our author, however, thinks very differently, and counsels thus:

“The signs marked on the *dying* and the *dead* are fallacious. Trust not, I cry, to powers of prediction, which you do not possess: *doubt* and *decide not*: the dying man may be the sinking man, exhausted by his malady, or perhaps exhausting his malady, and fainting under the conflict.—Exert all the arts which you possess, and which have been found not only able to resuscitate and restore the dying but even the *dead*: rouse him from this perilous condition, and suffer him not, by your supineness and neglect, to pass into the state of final and putrefactive death.” 328.

Under the impression that consciousness may remain for

some time after the human frame has ceased to exhibit any of the phenomena of vitality, our author suggests, as an important point of euthanasia, that the expression of those agonizing sorrows attendant on the last scene of life—the lamentations of father, mother, husband, wife, and other relatives, should be banished from the bed of death. “The violence of grief will be then suspended or alleviated, till all the resuscitative arts have been adopted and exhausted in vain. *The dying man departs with the hope of life, and the howl of despair is not raised, till he can hear it no more.*” 333.

It was our intention to have gone much further into the analysis of the work before us than we have done; but the style of the author and his arrangement, or rather want of arrangement of the matter, render it impossible for us to do justice to the work, without expending time, space, and labour, which our other duties will not permit. We trust that we have done enough to excite to the publication the notice of the profession—a notice which has hitherto been confined to a very limited circle. The humane and philanthropic feelings of the author have raised him very high in our esteem, while the ingenuity of his reasonings, and the extent of his knowledge, command our most unlimited respect.

XI.

Observations on the Climate of Penzance and the District of the Land's End in Cornwall: with an Appendix, containing Meteorological Tables, and a Catalogue of the rarer Indigenous Plants. Read before the Penwith Agricultural Society, and published by Request of the Members. By JOHN FORBES, M. D. Secretary of the Royal Geological Society of Cornwall, and Physician to the Penzance Dispensary. Octavo, sewed, pp. 64. London, 1821.

It is highly desirable that, before we order our invalids to a foreign climate, we should be acquainted with our own. Dr. Forbes has set a very good example in exploring the medical topography of a favoured spot in this island, which, all things considered, may probably vie, in no small degree, with some of those boasted cisalpine, or even transalpine retreats where Hygeia is supposed to hold her court, beneath a cloudless sky, and breathe recruiting health on every zephyr. The more intimately we become acquainted with the face of NATURE around us, the more will we be convinced of the general impartiality with which our Creator has scattered his gifts

for the use of mankind. To the Laplander and the Æthiopian, the Hindoo and the Peruvian, the sun appears, for precisely the same number of hours, above the horizon, in the course of the year, however various may be the length of their days and nights. And if this great enjoyment is so equally distributed in reality, though so partially in appearance, we may fairly conclude that, in other things also, the equilibrium is far greater than superficial observation is disposed to allow.

Cornwall in general, but the district of the Land's End in particular, possesses all the advantages and disadvantages of a small island moderately elevated above the level of the sea, and placed thirty or forty miles to the westward of the most southerly point of the main land.

I. *Temperature.* From a great number of authentic documents, and accurate thermometrical observations, Dr. Forbes is disposed to place the mean temperature of this place at 52°. But, like all small islands, or in other words, like the ocean itself, Penzance has a mean summer temperature considerably *under*, and a mean winter temperature considerably *above*, the mean of places similarly situated as to latitude, but placed at a distance from the sea. This appears evident from the following table of mean annual temperature, given in round numbers.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.
41°	44°	44°	49°	56°	60°	62°	61°	58°	53°	46°	43°
			Spring.	Summer.		Autumn.		Winter.			
			45°	59°		57°		43°			

The *equability* of temperature, in Penzance, from its peninsular situation, exceeds that of any other place in this island—an equability no less conspicuous in the variations of temperature of successive days, or hours, than in the extreme range of the day, month, or year, as may be seen in table No. 1. The mean variation of the thermometer in successive days, has been as follows:—

Winter.	Spring.	Summer.	Winter.
3°.77.	2°.97.	1°.72.	2°.28.

“In regard to the comparative temperature of the different seasons and months, it appears that this is equally indicative of the uncommon equability of the climate of this place.

“The greatest variation between the mean temperature of any two successive months is 7°; while the mean variation of successive months is only 3.5° or, calculating from the morning observation, 3.33°. The following is the statement of this mean monthly variation for the different seasons:—

	Winter.	Spring.	Summer.	Autumn.
By the morning observation	3.66°	2°	4.66°	3°
— mean of morn. and aftern. . . .	4°	2.66°	4.66°	3.33°
— — morn. aftern. and even. . . .	4°	2.66°	4.33°	3°

“The variation of temperature between the different seasons is also very small; in other words, their mean temperature is remarkably equal. The following is the difference:—

Between Winter and Spring	2°
— Spring and Summer	14°
— Summer and Autumn	2°
— Autumn and Winter	14°

“The coldest month is January;—the warmest month is July:—April and October approach nearest to the mean temperature of the year.” P. 10.

From the foregoing statements, as our author observes, it is evident that the temperature of Penzance is remarkable for its small annual, monthly, and daily range, and for its equability from day to day. The mean temperature of its winters is uncommonly high, for a British locality, and its summer heat uncommonly low for its southerly latitude. The difference of temperature between the different seasons is remarkably small—especially between Autumn and Winter, and between Winter and Spring.

Thus at Sidmouth the mean temperature for two years of November was 44°.—December 41°.—January 34°. While that of Penzance, in the same months, was as follows: Nov. 45°.—Dec. 49°.—Jan. 37°; making a general superiority in Penzance of 4°; and in the month of Dec. of 8°. The difference between Penzance and Exeter, Plymouth, Clifton, Isle of Wight, Gosport, London, &c. is also remarkable, as deduced from authentic tables. During the severe weather of January, 1820, when the thermometer, at 8 o'clock in the morning, stood at 11°, in London, it stood at 22°, in Penzance, at the same hour. “The lowest point to which it has fallen, at Penzance, at 8 o'clock in the morning, during the last fourteen years, has been 19°, and that only once.” The greatest height which the thermometer reached at Penzance during fourteen years, was 78°, whereas it is not uncommon, in other parts of England, to reach from 80 to 90 in some hot days. In illustration of the *equability* of the Penzance climate, Dr. Forbes gives a parallel between it and Edmonton, near London, for the month of August, 1820.

	London.	Penzance.
“ Absolute maximum	81°	67°
— minimum	38	46
Mean of the maxima	72	46
— minima	50	54

	London.		Penzance.	
Mean of both observations	61°	—	59°	
Extreme monthly range	43	—	21	
Diurnal range {	Max.	32	—	14
	Min.	11	—	5
	Mean	21	—	9" P. 17.

After introducing various tables in elucidation of the meteorology of Penzance, as far as regards temperature, Dr. Forbes concludes in the antiquated, but racine terms, of old Carew.

“The *spring* visiteth not these quarters so timely as the eastern parts. *Summer* imparteth a very temperate heat, recompensing his slow fostering of the fruits with their kindly ripening. *Autumn* bringeth a somewhat late harvest, especially to the middle of the shire, where they seldom inn their corn before Michaelmas. *Winter*, by reason of the south's near neighbourhood, and sea's warm breath, favoureth it with a milder cold than elsewhere, so, as upon both coasts, the frost and snow come very seldom, and make a speedy departure.” 22.

II. *Atmospheric Pressure.* The locality of Penzance, the humidity of its climate, and the variability of it winds, would lead to the expectation of peculiarity in the barometrical phenomena. Yet the only peculiarities observable are, the inferior altitude and smaller range of the mercurial column. The mean height of the barometer is 29.64, and the mean annual range 1.96. The mean monthly range is 1.07.

III. *Humidity.* Cornwall has always been considered a wet climate. This is true as regards hygrometrical humidity and the number of days on which rain falls; but as regards the actual *quantum* of rain, the imputation is exaggerated. Fogs are by no means common, yet the warm westerly winds bring with them a sort of drizzly rain, sufficient to wet thoroughly grass and other vegetables, or the clothes of a person exposed; while neither the rain-guage, nor the roads or streets show any indication of its presence. The number of days on which rain falls is computed at 157: yet the following remark of Dr. Borlase is peculiarly applicable.

“Our rains in Cornwall are rather frequent than heavy or excessive; and we have seldom a day so thoroughly wet but that there is some intermission, nor so cloudy but the sun will find a time to shine.” 26.

The average number of days on which snow falls, in any one year, is little more than *two and a half*; and in the last fourteen years, there have been four in which snow did not

fall at all. It seldom remains on the ground more than a few hours.

IV. *Winds.*—Cornwall is as remarkable for the variability of its winds, as for the steadiness of its temperature. Old Carew draws a quaint but faithful picture of this feature in the climate.

“Touching the temperature of Cornwall,” says Carew, “the air thereof is cleansed as with bellows, by the billows, and flowing and ebbing of the sea, and therethrough becometh pure and subtle, and by consequence healthful.” “This notwithstanding” (he says in another place) “the country is much subject to storms, which fetching a large course in the open sea, do from thence violently assault the dwellers at land, and leave them uncovered houses, pared hedges, and dwarf trees, as witnesses of their force and fury.” 34.

Our limits prevent our noticing numerous other curious and interesting subjects in this pamphlet; yet we hope we have exhibited enough to convince our brethren, that in Cornwall they have no mean substitute for the climate of Italy and the south of France, with JOHN BULL’S FIRE-SIDE into the bargain—a fire-side around which more real comforts are concentrated than in any other country in the world.

“I shall subjoin a table of the mean morning temperature of the three coldest months at Nice, Pisa, and Rome, (extracted from Dr. Clark’s late excellent work on the climate and diseases of France and Italy,) compared with that of Penzance for the same years. This statement will show the difference of temperature between these places and Penzance to be much less, I think, than might have been anticipated from considering the difference of geographical position; certainly much less than had been conceived by myself before examination.”

Fahrenheit’s Thermometer.	Time of observation.	Dec	Jan.	Feb.	Mar.
Nice, 3 years, (1815-1817)	sun-rise	44	44	47	45
Pisa, 3 years, (1815-1817)	sun-rise	42	40	43	41
Rome, 3 years, (1815-1817)	7 a. m.	42	41	43	42
Penz. 3 years, (1815-1817)	7 & 8 a. m.	42	41	44	42

64.

The foregoing paper sufficiently evinces the accurate observations and legitimate deductions of its very able author; and we hope that Dr. Forbes will follow up his investigation of the medical topography of Cornwall, by observations on the diseases to which the climate is favourable—and especially on that great enemy of England, PULMONARY CONSUMPTION.

XII.

An Essay on Mercury ; wherein are presented Formulae for some Preparations of this Metal, including Practical Remarks on the safest and most effectual Methods of administering them, for the cure of Liver Complaints, Dropsies, Syphilis, and other formidable Diseases incident to the Human Frame ; being the result of long experience and diligent observation. By DAVID DAVIES, M. D. Member of the Royal Colleges of Physicians and Surgeons, London ; and Senior Surgeon to St. Peter's Hospital, Bristol. 8vo. London, pp. 35, 1820.

“Nam ne agricolam quidem aut gubernatorem disputatione, sed usu fieri.—*Celsus.*”

- **ALTHOUGH** the current of abuse has run strongly against mercury in the writings of some modern reformers, and although there was some foundation for the reprehension of the abuses of this powerful medicine in the hands of ignorance and rashness ; yet, among all sober-minded practitioners, the medicine holds its original rank, and is more depended on, in a great variety of diseases, than any other article of the pharmacopœia. Every attempt, therefore, which is honestly made, and candidly imparted, for the purpose of pointing out the safest mode of administering this valuable remedy, and preserving the constitution from the effect of mismanagement, should be received with thanks by the profession, although no brilliant discovery be made, nor specious theory advanced.

Our author, who is a veteran in the art, and has had thirty or forty years hospital as well as private practice to confirm or refute preconceived opinions, is convinced, from long observation, “that mercury, introduced cautiously into the system by inunction, more certainly removes disease than by the internal exhibition of it ;—also, that mercury eradicates diseases more certainly and more safely, when not allowed to pass off by the salivary glands, than when salivation is produced.”

“Much has been said and written by theorists on the cure of syphilis without the aid of mercury. I feel it therefore an imperious duty to caution the credulous and uninformed against a reliance on the anti-syphilitic power of any other medicine yet discovered. I do not, however, mean to say, that the constitution, impaired by disease or by the improper administration of mercury, may not occasionally derive benefit from the use of other remedies ; among which might be named iron, sarsaparilla, bark, guaiacum, nitric acids, and other tonics.” P. viii.

Dr. Davies thinks it must be allowed that, for internal use, the less mercury (quicksilver) be changed by fire, and the less it contains of mineral or vegetable acids (provided it be sufficiently oxydated to produce the proper effects on the constitution,) the better it will be fitted for eradicating diseases. Under this impression, he offers the following formulæ for milder and safer preparations of mercury than those in common use.

CONFECTIO HYDRARGYRI.

“ R Hydrargyri purificati,
Mannæ optimæ,* partes æquales,
Tere Hydrargyrum cum Mannâ donec globuli visum
fugerint ut fiat Confectio.

PULVIS HYDRARGYRI.

“ R Confectionis Hydrargyri,
Pulvis Glychyrrhizæ, partes æquales,
Mt. Pulvis signatur Pulvis Hydrargyri.

SOLUTIO HYDRARGYRI.

“ R Confectionis Hydrargyri, grana triginta duo,
Mucilaginis gummi acaciæ, fluidunciam,
Syrupi, fluidrachmas sex,
Aquæ Cinnamomi, fluidrachmas duas,
Signatur solutio Hydrargyri.” 8.

We have often exhibited the pil. hydrargyri in draughts, when a repugnance was expressed against pills, and that without any decomposition of the mass. The above formulæ, therefore, draught and powder, may be useful in practice.

When mercury, in the above mild form, is introduced so as to produce a brackish taste in the mouth, swelling of the gums, with a gentle flow of viscid acrid saliva, then, our author thinks the boundary is reached, beyond which the medicine should not be administered, particularly to females and children.

We cannot follow our author into the theory of the *modus operandi* of mercury on the human frame. The subject is involved in great obscurity, and we can only merely mark the phenomena produced, without attempting to explain the *quo modo*, as yet.

Our author prefers the *confectio hydrargyri* to the official *pilula hydrargyri* of the shops, as agreeing better with

* Molasses or treacle, may, I think, be advantageously substituted for the manna: as the former does not undergo decomposition.

the stomach and bowels, and being more uniform in its operation. In functional disorders of the digestive organs, this form is perhaps the best, taken in doses of four to eight grains at night, and a mild purgative the following morning, repeated once or twice a week, and prescribing rhubarb, columba, or carbonate of iron, on the intermediate days, with exercise on horseback in the open air.

Dr. Davies lays down a code of instructions for the proper administration of a mercurial course.

We can hardly agree with our author that, even "in recent and slight cases of syphilis," the patients may pursue their accustomed avocations, and keep to their usual diet while taking mercury. We are convinced, that where mercury is at all necessary, low diet and confinement within doors are highly judicious, if not absolutely necessary restrictions. When patients labour under formidable stages of the disease, our author considers the following regulations to be necessary. 1st, The tepid bath—2d, An aperient, combined with a few grains of calomel—3d, Flannel dress—4th, Regulated temperature to about 64°—5th, Diluting drink, and milk diet, with arrow-root, or wheaten flour—6, Mercurial frictions carefully, but steadily, pursued, till the cure is effected, without inducing violent ptyalism.

"In conclusion," says our author, "an anxiety to serve mankind, and a strong conviction in my mind, deduced from extensive practice, diligent observation, and an experience of forty years, impel me to add that this confection, combined with hyoscyamus, myrrh, or carbonate of iron, has by me been found a most valuable remedy in phthisis pulmonalis and scrophula; united with tonics, purgatives, and diuretics, of excellent use in dropsies; after local bleeding by leeches, joined to appropriate remedies, very beneficial in dispersing indurated tumours in the female breast, the prostate and other indurated glands. Lastly, combined with tartarized antimony, or with antimonial powder, it forms one of the best febrifuge remedies, suited to almost every case of pyrexia." 33, 34.

XIII.

A Practical Treatise on the Internal Use of Hydro-cyanic (Prussic) Acid, in Pulmonary Consumption and other Diseases of the Chest, as well as in several Complaints attended by great nervous irritation, or acute pain, &c. &c.
By A. B. GRANVILLE, M.D. F.R.S. F.L.S. M.R.I. &c. &c.
Small octavo, pp. 417. Second Edition, greatly enlarged.
London, 1820.

We noticed the first edition of this work (though not very fully) in our quarterly series. No. 6, October, 1819; but the



present edition is so much enlarged as to be "a new work, and the fourth attempt which the author has made in the course of five years, to establish the claims of a new and powerful remedy to the attention of the medical profession in this country." We remember the time when the sanguine hopes held out by this new remedy, would have caused our hearts to palpitate with joy, at the prospect in which suffering humanity might reasonably indulge; but twenty-five years of observation have somewhat chilled our feelings on these occasions, and we have long been convinced that a careful study of the causes, seat, nature and indications of a disease, will enable the attentive practitioner to effect most of what can be effected, by even a very few of the common remedies now in use. Yet, as long as man is subject to irremediable disease, and consequently death, he will seek after "new and powerful remedies:" and although he will be, myriads of times, disappointed, he will occasionally discover very valuable auxiliaries to the healing art. That prussic acid is a powerful medicine we have no doubt; that it is capable of useful application in many disorders, we also believe;—but that it will considerably disappoint the expectations of some of its employers, we confidently predict—and that because more virtues are attributed to it than can reasonably be hoped from any one remedy. But to proceed to our analytical labours.

We shall pass over the chymical history of prussic acid, and also the methods of procuring it employed by Scheele, Vauquelin, and Majendie, in order to give that resorted to by the Apothecaries' Company. The formula was supplied by Professor Brande, and is as follows:—

Prussiate of mercury, *oj.*; muriatic acid, *oj.*; water, *℥v.* Draw off four pints, and rectify through chalk. Dr. Granville makes some objections to this process, observing that the acid cannot thus be obtained in an uniform and well-known state of concentration.*

* Since this analysis was drawn up, some observations on these objections to the Company's process, have appeared in the *Journal of Science*, wherein it is confidently stated that the process employed at the Hall, is, upon the whole, less objectionable than any of the others; and that the prussic acid thereby obtained, is more uniform in its strength, and better adapted to medicinal purposes.

In Dr. Ure's very excellent Dictionary of Chymistry, recently published, and which we strongly recommend to our brethren, we perceive the following "ingenious and accurate process for preparing prussic acid for medicinal purposes," communicated to Professor Ure by Dr. Nimmo, of Glasgow:—

"Take of the ferroprussiate of potash 100 grains, of the protosulphate of

In the fourth section our author details the physical properties of prussic acid, especially when prepared according to Gay Lussac's method.

"1. At the common temperature it is liquid, colourless, and transparent, with a strong smell of bitter almonds, and a peculiar pungent bitter taste, at first bland and sweetish.

"2. It is volatilized at 20° of the centigrade thermometer, boils at 26°, and at 15 below 0 it becomes concrete, and crystallizes in needles, like nitrate of ammonia. Its extreme volatility is such, that when a drop of it is exposed to the air, on the end of a glass rod, it is rapidly crystallized. The same happens if a drop be suffered to fall on a sheet of paper.

"3. Its specific gravity is 0.70583 : when in a concrete state it is only 0.600 : while that of its vapour is 0.947.

"4. It has an odour so strong and characteristic, that it produces almost immediate pain in the head, with deafness, unless largely diluted with air or water, as in the case of the acid prepared for medicinal purposes. In other respects the smell is the same as that of peach flowers or of bitter almonds.

"5. Its tendency to assume the gaseous form is very considerable : it is decomposed by a high temperature, or by the contact of light, when carbonic acid, volatile alkali, and carburetted hydrogen gas are given out, a carbonaceous matter remaining behind.

"6. When brought near to a body in a state of combustion, it instantly inflames, and burns with a blue flame. Water and alcohol dissolve it readily." 30.

The 5th section is devoted to the properties of this substance on the vital machine, as ascertained by physiological experiments. The principal of these are, that when administered, in its concentrated state, to warm blooded animals, it destroys their sensibility, and the contractility of their voluntary muscles.

iron 84½ grains, dissolve them separately in four ounces of water, and mingle them. After allowing the precipitate of the protoprussiate of iron to settle, pour off the clear part, and add water to wash the sulphate of potash completely away. To the protoprussiate of iron, mixed with four ounces of pure water, add 135 grains of the peroxide of mercury, and boil the whole until the oxide is dissolved. With the above proportions of peroxide of mercury, the protoprussiate of iron is completely decomposed. The vessel being kept warm, the oxide of iron will fall to the bottom, the clear part may be poured off to be filtered through paper, taking care to keep the funnel covered, so that crystals may not form in it by refrigeration. The residuum may be treated with more water, and thrown upon the filter, upon which warm water ought to be poured, until all the soluble part is washed away. By evaporation, and subsequent rest in a cool place, 145 grains of crystals of the prusside or cyanide of mercury will be procured in quadrangular prisms." *Professor Ure's Dictionary of Chymistry; art. Hydro-cyanic Acid.*

"But even the strongest hydro-cyanic acid of Gay Lussac, though dangerous in its preparation, soon ceases to be so, as it is impossible to preserve it in a state of purity more than a few hours, a fact to which we have already alluded."* 44.

This seems a great objection to the general use of the remedy, especially in the country, where it is not likely to be often prepared.

In respect to the action of prussic acid on the nervous system, our author cannot say whether it is directly sedative, or first excitive, followed quickly by a sedative operation. The same question has been long agitated respecting the properties of digitalis. It is, however, as Dr. Granville properly observes, quite sufficient for practical purposes, to ascertain the aggregate sum of all the visible effects which the prussic acid produces. If the picture of its effects† be not overcharged, we are possessed of a valuable nepenthe indeed.

Dr. Granville here enumerates cursorily the various diseases to which this remedy is applicable; for which list see page 271 of the second volume of our quarterly series.

Since the first edition was published, Dr. G. has administered the prussic acid, as a palliative, in organic, or incurable diseases, and he seems to think with much good effect.

The 8th section, on the poisonous properties of this medicine, when taken in too large doses, we must pass over, though containing much curious and interesting matter. The 9th section also, containing a history of the introduction of the prussic acid into medical practice, does not come within the scope of our analysis.

Our business lies most with the second part of our author's work, containing "a short preliminary account and delineation of the various complaints in which the prussic acid has been administered, as a medicine." In the first section of this part, Dr. Granville fires some tremendous broadsides, right and left, against certain critical benches in this metropolis. But as we are, happily, not included in the number, we shall leave our brethren on the benches to fight their own battles.

In those cases of pulmonary consumption, depending on hereditary organization of the chest and respiratory apparatus, our author has exhibited the acid—not with the hope of

* Gay Lussac says, "En conservant cet acide dans des vases bien fermés, même sans qu'il ait le contact de l'air, il se décompose quelquefois en moins d'une heure." Op. citat.

† See page 270 of vol. ii. quarterly series.

preventing the fatal process going on; "but with a view to allay the nervous irritability, restlessness, and watchfulness of the patient." In this, however, Dr. G. was disappointed; for the prussic acid proved equally unavailing as opium, hyoscyamus, digitalis, lactucarium, &c.

Tubercular and strumous phthisis, Dr. G. takes an opportunity of remarking, may probably be often owing, in this country, to the too great quantities of butter given to children. In what is known by the first stage of this species of phthisis—that is, before any suppuration or softening down of the tubercles, Dr. G. thinks, if the prussic acid be given, "a perfect recovery may be expected." Here our author relates several cases in his own and other physicians' practice, illustrative of this statement; but we confess that the cases have not left that impression on our minds, which they are meant to convey. Thus in the first case, (Majendie's) no symptoms whatever are detailed, and it is only stated generally that the young lady had—"every symptom of incipient consumption." In the second and third cases (Dr. Scudamore's) the patients had "*puriform* expectoration," which entitles them to be placed beyond the range of the *incipient* stage: and if the expectoration were really pus, it is too much to think that they could have been so easily cured by the prussic acid. In the fourth case (Master Blackwell) Dr. Granville himself gave in an unfavourable prognosis to Sir Walter Farquhar. "The boy was wasting daily—the cough and night sweats had manifested themselves in a decided manner." He took the prussic acid, and, "in about three days the disorder seemed arrested." In a fortnight he was well with the exception of debility. We put it to the experience of our author, and of our brethren at large, whether such sudden cures are at all compatible with what is designated tubercular consumption, in any stage whatever, and particularly where daily wasting and other formidable symptoms have established themselves.

In the tenth case we are at a loss to conceive how Professor Brera could consider it in the *first* or *inflammatory* stage, when he concludes thus:—"nam sputorum quantitas decrevit, eorumque *purulentia* in melius se commutavit; quæ originem ex *tuberculis* ducebat *suppuratis*, antequam æger clinicum institutum subiret." 163. If then the Italian Professor cured a patient with *suppurated tubercles*, there is no longer any question about the power of prussic acid over *confirmed* consumption.

In the next section Dr. Granville states, and we think very truly, that, "when the *suppurative* stage of the tubercles has fairly begun, the hopes of recovery from the effects of the



prussic acid, become every day more faint, &c. Still, however, our author thinks that, not only alleviation of symptoms, but even recovery, in some instances, may be looked for, from the remedy, and "that even at a very advanced period of this complaint." Dr. G. supports this hope from what has resulted from *other* medicines, "under the most unfavourable circumstances," "as Dr. Lænnec has proved." But if our readers will consult Lænnec, or our analysis of his work, at page 467 of our last volume, they will find that these cures in suppurated tubercles, resulted from a spontaneous process of nature, namely, a "transformation of the pulmonary ulcerations into semi-cartilaginous fistulæ," and consequently, not from any particular remedy. Now these observations are not meant to discourage the use of prussic acid, but to moderate the too sanguine expectations of the prescriber, lest a valuable medicine be brought into discredit, from an exaggerated estimate of its powers.

We must pass over a great mass of cases of Dr. Granville's and his correspondents, which we cannot analyze, and therefore on which we shall not give an opinion.

In the second section, our author endeavours to show that, in pneumonia and other inflammatory complaints, after we have carried vascular depletion as far as prudence will permit, the disease is still not quite subdued, and at this juncture, he thinks, "the prussic acid will be found productive of the most advantageous effects." We wish that further experience may confirm this, and also that the colchicum may support the high character lately given of it in similar cases.

At page 304, we were a little surprized at the boldness of the following assertions :

"I will, however, state, once for all, that the whooping-cough, in itself, is *never* an inflammatory disease—for no traces of inflammation have been found in the respiratory organs of those who have fallen victims to it—and that when the complaint has been very violent, and has lasted a great length of time ; and then only tokens of inflammation have been found in the brain, as the result of strong and often repeated spasms of the organs of respiration, producing a great determination of blood to the head." 305.

Surely Dr. Granville will not weigh the nosological opinion of Cullen against the evidence of dissection. Dr. Watt, of Glasgow, has demonstrated inflammation of the mucous membrane of the lungs in six cases of fatal whooping-cough, three of them, unfortunately, his own children. Were the evidence of an obscure anonymous reviewer, of any weight, we might assert, that we have opened several children, and one very lately, where the most decided marks of pulmonic

inflammation were shown on dissection, after whooping-cough. It is true that our author quotes a passage from an Italian work, to show that in twenty-three anatomical investigations of children after death from whooping-cough, there was cerebral turgescence or effusion in all—and “that no symptoms of disease occurred in the chest, *except in a few individuals, who presented an incipient phlogosis or plethora, or serous effusion in that cavity.*” With all due deference for our foreign brethren, we beg leave to attach at least as much credit to the statements of our own countrymen, who have almost unanimously agreed, that whenever whooping-cough presents febrile symptoms, which, in most of the severe cases it does, then there is bronchial inflammation. In respect to whooping-cough producing great debility from the non-oxygenation, or non-decarbonization of the blood, this phenomenon was distinctly stated seven years ago, in a former series of this Journal, while reviewing the work of Dr. Watt.

“But may not,” says the reviewer, “the dark and singular condition of the blood be attributed to the conjoined influence of disordered respiration, and of the morbid state of the mucous membrane, rendered further impervious by effusion into the air cells and bronchiæ, if such effusion had, at that period, taken place? Thus would the access of atmospheric air to the blood of the pulmonary vessels be greatly obstructed; and may we not, on this principle, explain the sudden and extreme prostration of strength, which occurred in this case; and which characterizes, more or less, the other diseases of this important membrane.” *New Med. and Phys. Journ. for February, 1814.* P. 165.

Dr. Watt imagined that in whooping-cough there may exist —“some eruptive disease of the membrane of the air-cells and bronchiæ, so minute as to escape ordinary observation, yet so considerable as to excite that inflammation,” which seems principally to constitute the disease. This, of course, is ingenious conjecture, not confirmed by observation. Our own opinion is, that the specific contagion of whooping-cough is applied to, and has its proper domicile in, the mucous membrane of the lungs, where it excites irritation and spasmodic cough, very generally accompanied by more or less of specific inflammation in the aforesaid membrane. That prussic acid is a valuable remedy in this affection, notwithstanding Dr. Elliotson’s unfavourable report, we have no doubt; and we recommend to the perusal of our brethren the numerous cases detailed from page 305 to page 319, as affording very presumptive evidence, at least on this point.

At page 320, Dr. Granville enters on the consideration of asthma, and the good effects of the prussic acid in the spasmodic species of this disease. When we say *spasmodic*

asthma, we must beg the forbearance of those gloomy pathologists, both in France and England, who see nothing but *organic* disease of the heart in every case of asthma. That the functions, and, ultimately, the structure of the heart, occasionally suffer in severe and long-continued spasmodic asthma, especially as life advances, no one can reasonably doubt; and this is the opinion entertained by the most enlightened pathologists of that capital where M. Rostan resides. Some of our countrymen, however, are so captivated with the organic theory of the French pathologist, that they have adopted it apparently without reflecting on the influence which the *nervous system* exerts on respiration, and the symptomatic disorders of the latter from derangements of that system. If M. Rostan has found organic disease of the heart in the dissection of asthmatics, others—many others, equally worthy of credit, have found no organic disease in any viscus. We refer the reader to the temperate and philosophic treatise of our own countryman, Dr. Bree, especially to the 6th section of the first part, where we only perceive one or two instances of disease of the heart among the numerous examinations of asthmatic bodies collected from the best ancient and modern authors. The very fact that asthmatics, when free from other diseases, generally live to an old age, which is any thing but the case in organic diseases of the heart, is a proof sufficiently convincing that genuine asthma has nothing to do with such organic causes. The truth we believe to be, as Lullier Winslow has remarked, that the dyspnœa accompanying those melancholy and incurable diseases under consideration, has been confounded with spasmodic asthma, and thus given rise to the doctrine in question.

“L’asthme, tel que nous l’avons peint, est plus rare qu’on ne pense. Beaucoup d’auteurs ont confondu cette maladie avec la dyspnœe, qui n’est autre chose qu’une difficulté de respirer, plus ou moins intense, et toujours *symptomatique d’une autre affection, telle que d’une maladie organique du cœur ou de gros vaisseaux, &c.*”

The above appears to us to be the true state of the case, after all the disputes between M. Rostan and his opponents.

But to return from this digression, which, it is to be hoped, has not been quite out of place. Dr. Granville administered, with benefit, the prussic acid in the case of Mr. K——, who had suffered from asthma for upwards of six years, his complaint assuming an alarming type, the breathing becoming exceedingly difficult, and being rendered more so by the least exertion, or by atmospherical vicissitudes.

“This state of exquisite irritability—this inexpressible anguish, and all the sufferings it produces, were removed by the free but

cautious exhibition of the diluted hydro-cyanic acid. Mr. K—— now coughs but seldom, sleeps well at night, becomes more inured to the change of weather, can easily bear exercise, and ascends a staircase without being forced to stop, or without any oppression at the chest." 322.

Mr. Rudland has communicated two cases to Dr. Granville, the first of which is pretty minutely detailed, and of this we shall present an outline to our readers.

Case. Sarah R——, ætat 42, had been, for many years, subject to dyspnoea, habitual cough, and occasional attacks of spasmodic asthma. During the last eighteen months, she had been repeatedly under Mr. Rudland's care, and opium, æther, and other powerful antispasmodics, had been administered, without effect. On the evening of the 26th October, 1819, Mr. R. saw her in a dreadful paroxysm of spasmodic asthma. Venesection had formerly been tried at the commencements of these attacks, without evident advantage. The following prescription was therefore ordered :—

R. Acidi hydrocyanici ℥ xij.

Misturæ amygdalæ 3vj.

Syrupi tolutani 3iij.

Fiat mistura cujus capiat partem quartam secunda quaque hora.

The patient felt something easier soon after taking the first dose, and still more so after the second. "Before taking the third dose the most alarming symptoms were greatly relieved; her respiration became freer, her pulse more regular, her countenance indicating a considerable alleviation of her suffering." She slept several hours this night, and, towards morning, was able to take the horizontal position. Mr. Rudland remarks, that after former paroxysms, great difficulty of breathing, incessant cough, and copious expectoration, generally remained for weeks, and sometimes continued until a fresh paroxysm. In this instance, however, the acid appeared to have removed the morbid spasmodic action before exhalation or effusion had taken place.

In the seventh section Dr. Granville treats of hæmorrhages, painful menstruation, and abortion. Dr. Granville here alludes to the scepticism of Dr. Elliotson respecting the power of controlling hæmorrhage, and brings forward cases from the practice of others and of himself, in favour of the medicine. We shall present an outline of the following case from the American Medical Recorder :—

Case. "A man, 25 years of age, of a strong constitution, robust, and of a choleric temperament; subject from his infancy to bleeding from the nose, and latterly to hæmorrhoids, complained for about a year of a pain in the epigastric region, accompanied with a strong pulsation in that part. In the mean time his complaint did not prevent him from attending to his trade. One day after having travelled about to various places in a rough vehicle, he experienced a con-



siderable augmentation of pain, which was followed by a copious vomiting of black blood, and a great degree of debility. Returned home, he complained of anxiety—his countenance expressed but little animation; the heat of the body was increased; his pulse was hard and full, and his bowels were constipated. We gave him a decoction of tamarinds; but he was not able to retain the medicine. The *irritability* of the stomach increased to such a degree, that he rejected every thing that he took, even a solution of gum-arabic. We were obliged to have recourse to clysters, and cold applications over the stomach; despite of all, the vomiting continued, becoming more and more copious, reducing the patient astonishingly. The pulse became small and feeble, his extremities were cold, and the constipation very obstinate. In this state of things, we determined to use the laurel water, in the dose of sixty drops in a drink, of which a certain quantity was given every two hours, and at last every hour. It was the only medicine the patient could retain. It merits in this case, the eulogium which Thilenius has given it. The first doses sensibly relieved the patient. The vomiting returned but once a day, in very small quantity, and finally ceased; as also did the pain in the epigastric region, and the anxiety. The patient was in a short time restored, and continues in good health to this day." 332.

Dr. Granville next relates the case of the Hon. Mrs. —, who had been subject for some time to morning hæmorrhage from the lungs, for which the sulphuric acid, bark, and various astringent medicines, had been prescribed in vain. Dr. G. exhibited two drops of the prussic acid every three hours, in a camphorated mixture, and soon checked this complaint.

The case of Ann Dunn, a dispensary patient, is stated at page 333 of the volume. This woman, after weaning her child (during the suckling of which the catamenia continued) became affected with uterine hæmorrhage, to an alarming extent, which lasted about ten weeks, accompanied by a severe shooting pain in the breast. Our author first prescribed infusion of roses with sulphuric acid and tincture of rhatany, which relieved the other symptoms, the uterine hæmorrhage continuing. He therefore prescribed the following mixture:—

℞. Infusi cascarillæ - ℥vj.
Acidi hydrocyanici ℥xij.

ft. mist. capiat coch. ij. majora quater quotidie.

In about a week the flooding had completely ceased. Two or three other interesting cases of uterine hæmorrhage are stated between page 336, and page 345, for the particulars of which, we must refer to the work itself.

In the 8th section our author comes to the consideration of nervous diseases, and affections of the stomach. As far as regards nervous diseases, our author's statements are not very satisfactory—indeed he does not appear to lay much

on this part of the section. He alludes to the publication of Dr. Elliotson, reviewed in another part of this number, as forming a suitable appendix to what was already known on the subject of prussic acid in stomach affections, as recorded by Thilenius, Sprengel, and more recently by Mr. A. T. Thomson. We shall, therefore, here present the analysis of a recent communication from the last mentioned gentleman, to our author, containing "his further experience, with respect to the internal use of the hydro-cyanic acid in different complaints, since the former edition of this work."

Mr. Thomson's further experience he observes, has confirmed his opinion of the efficacy of this acid in spasmodic coughs; but in whooping-cough he has not given it that trial which can authorize a decided opinion of its powers. This acid *relieved* a violent hiccough, supervening on an attack of hæmoptysis, and resisting every other means, but could not be continued, in consequence of the debility it occasioned. In a case of *tic douloureux* the internal and external use of the acid was unsuccessful.

"It may not be uninteresting," says Mr. Thomson, "to the profession, to know the remedy which finally subdued this very violent attack of *tic*. The patient was a young lady, under fifteen years of age, of a sanguine temperament and quick parts. She had suffered an attack of the disease about a year before, and was not relieved for many months, although it was less severe than that for which I was requested to see her. The pain, which was most excruciating, and returned every three or four minutes, was situated under the chin, about an inch backwards from the symphysis of the lower jaw; and apparently in the course of the branch of the ninth pair of nerves that supplies the *genio-hyoideus* muscle. A small knot or hardness could be felt externally, and this was enlarged during every paroxysm. The throat was partially affected, and deglutition somewhat impeded, as well as speech. The screams of the patient, when the paroxysms returned, and the writhings which the torture of the pain occasioned, were most heart-rending to those who witnessed them.

"Finding that every remedy with which I was acquainted had failed, I resolved to try the effect of a powerful mental impression; and, with this in view, made inquiry of the lady under whose charge she was at school, if she knew of any strong antipathies of her pupil. She informed me she had an unconquerable dislike to a dog which was in the house; and having obtained this information, and acquainted the governess with my intention, I proceeded to the room of my little patient, and informed her with as much gravity of countenance as I could command, that the only other remedy I had in store for her disease, was one which I meant should instantly be resorted to; and that it consisted in rubbing the affected part with the back of the dog. The effect was most extraordinary—her face

became as pallid as that of a corpse, large drops of sweat formed on the forehead, and the girl appeared passing into the most alarming syncope. She, however, gradually recovered; and from that moment, no other paroxysm of the tic was experienced until eighteen months afterward, when the disease was arrested on the second day of its attack, by suddenly taking her out of bed, and hurrying her into a shower bath. The reason the dog was not again had recourse to was, that she had very imprudently been informed of the motive which had induced me to propose him to be employed in the former instance. I cannot attempt to give the rationale of this practice; but I leave the facts in the hands of the profession." 376.

In some cutaneous diseases, particularly *acne indurata*, and *rosacea*, Mr. T. has found the acid extremely useful as an external application.

"I have not given it a fair trial in phthisis, for the result of the few cases in which I have employed it, were not such as would induce me to place much confidence in its remedial powers in that disease, when it is at all advanced. I have seen enough of it, however, to be satisfied that it may do much good if the opportunity occurs of giving it in the early stage of the disease, even when there is a predisposition to its tubercular form." 377.

Mr. Thomson has had many opportunities of ascertaining the powers of this medicine in relieving those affections of the stomach in which alkalies and bitters are usually prescribed; and he is now inclined to ascribe the benefit which sometimes follows the use of alkaline medicines in these complaints, to the well-known power they possess, "of diminishing morbid irritability when applied to secreting surfaces, thereby enabling the juices of the organ to be more slowly secreted, and consequently of a more healthy character, rather than to their chymical property of neutralizing the superabundant acid which is always generated in dyspepsia." 386.

Here Mr. Thomson remonstrates with Dr. Elliotson for overlooking his observations on the use of prussic acid in stomach affections, published in the first edition of Dr. Granville's work; and consequently claims priority, in its application to such class of complaints, as far as Dr. E. and himself are concerned. Mr. T. thinks it unnecessary to detail more than one case in this class of affections, as they were all treated nearly in the same manner, except that purgatives were employed more in some than in other instances.

"Mrs. S——, the wife of the Rev. Mr. S——, æt. twenty-five years, of a delicate, slender habit, the mother of three children, had long suffered from dyspepsia. The chief symptoms in her case were,—a sense of fulness of the præcordia, which impeded respiration, and brought on palpitation of the heart to a distressing degree;

flushing of the face, acid eructations, chapping and soreness of the tongue, and continued thirst. Her spirits were also occasionally much depressed, and the least fatigue produced a disposition to fainting. As she had been long under medical treatment, and had taken all the ordinary remedies for such symptoms, without any permanent benefit, I resolved to try the powers of the hydro-cyanic acid, having recently witnessed its beneficial effects in the case of Mr. R——, and therefore on the 28th of January, 1819, she commenced the use of the following draught.

“R. Acidi Prussici m j.
Infusi Cascarillæ f 3 xj.
Syrupi Croci f 3 j.

M. ut fiat haustus bis quotidie sumendus.

“In a very few days she was much better: to use her own expressions, she was less nervous, could take more exercise, and had scarcely had the palpitation since the second day after she commenced taking the draught. The dose of the acid was now increased to two minims, and, in this dose, it was continued until the 1st of March; when the patient, finding she was better than she had been for many years, was directed to leave off all medicine, and to go into the country to recover her strength.” 389.

Mr. Thomson concludes by stating it as his opinion, that the prussic acid is “a most powerful and direct sedative, and cannot fail of proving, in the hands of judicious and scientific practitioners, a remedy of the greatest value.” 389.

After the body of Dr. Granville's work was worked off, the particulars of a case of consumption, cured by prussic acid, were communicated to him by Mr. Plumbe, of Great-Russel-Street: and a similar case occurred in his own practice.

The outline of Mr. Plumbe's case was as follows: A woman, aged 30, a nurse in a family of respectability, “had been labouring under symptoms of incipient phthisis, since May last.” (Oct. 1820.) Digitalis, squills, and various remedies had been used without benefit.

“On the 18th of July, when the hydro-cyanic acid was first prescribed, the state of exhaustion of the patient, with the very copious expectoration of pus, seemed to warrant the opinion that she could not long survive.” 392.

The patient's cough was now very distressing—her nights sleepless—the perspirations copious—the strength greatly exhausted—“the quantity of pure pus expectorated, about four or five ounces in the twenty-four hours.”

“In this state of things, the acid was prescribed by Dr. Scudamore, according to the following formula.

“ R. Acidi Hydro-cyanici m vj.
 Decoct. Camphoræ.
 Mist. Amygdalæ aa f 3 iij.
 Gutt. nigr. m. xij.
 Syrupi Simp. f 3 j.
 Capt. 4th partem 6th horis.” 393.

The quantity of acid was afterward increased two minims every twenty-four hours. In about a week she began to sleep sound: does not expectorate above half the former quantity of pus—her appetite became improved, and her strength increased. “The patient continued to take the acid with the daily increase of two minims, in combination with bark, black drop, &c. as before.” In three days Mr. Plumbe found a beneficial change, still more surprising than before. In short, in a month she was well enough to proceed into the country, “with no symptom of her former disease, but some remains of debility.” 395.

As the black drop, bark, and other medicines, were employed here *along with* the prussic acid, it is impossible to say, decidedly, that the cure resulted from the latter medicine alone. This much, however, we may venture to say;—that the event proved the purulent expectoration to have come from an unbroken surface; for had it come from ulcerated or broken-down tubercles, the issue would have been very different.

Dr. Granville's own case, Miss Munn, detailed from page 396 to page 400, is a very strong one; and were we less sceptical in respect to the curability of confirmed consumption, we should be staggered in the opinions long impressed on our minds from melancholy experience. We remember that some twenty years ago, we were buoyed up with the most sanguine hopes of curing phthisis, in all its stages, by digitalis; the testimonies in favour of which were then far stronger than those of prussic acid are now. If any of our readers will turn to the fifth volume of the Medical and Physical Journal, page 201, *et seq.* and read the report of Hospital-Physician Magennis respecting the treatment of seventy cases of phthisis in all its stages, they will be inclined to join us in scepticism, till the next twenty years shall have settled the anti-phthisical virtues of prussic acid.

We shall take a short case, at random, from Dr. Magennis.

“James Smith, aged 26, a seaman belonging to his majesty's ship Ville de Paris, admitted on the 6th of October last. Has been ill a long time with phthisis; he was affected with every symptom which is the usual concomitant of the disease in its last and most aggravated stage; constant and deep-seated pain in both sides, but more particularly in the left; expectoration profuse, and rankly purulent, emitting a most disagreeable fœtor; regular attacks of

febrile exacerbations every evening; profuse colliquative sweats; formerly subject to frequent hæmorrhages from the lungs, but nothing of that kind had occurred lately: he was reduced to the lowest state of debility, although twelve months before of Herculean powers, as one of his mess-mates informed me. The moment I saw this man, I pronounced it a lost case; notwithstanding these unfavourable appearances, he began the Tinct. Digital. in small doses, which were gradually increased, and systematically persevered in till the 21st of November, on which day he was discharged, cured. The expectoration, originally a pint and a half, was reduced to about a table-spoonful or less, and wholly free from purulence; the nightly perspirations had ceased upwards of twelve days; the thorax was completely freed from pain; and the cough had for some days totally disappeared, except for a few minutes after his first getting out of bed in the morning." *Med. and Phys. Journ.* vol. v. p. 206.

For the various other cases, twenty-five in number, recovered from the last, or purulent stage of phthisis by digitalis, we must refer to the volume alluded to. Whoever has been in the habit of examining the disorganizations in the lungs of those who die of phthisis, and have seen the very small portions of sound organ which sustain life in the last stages, must utterly despair of reparation in such stages, unless the miracles of Medea's cauldron should again be wrought on earth.

Greatly as we have exceeded our limits, we must yet dedicate another page to the tenth and last section in Dr. Granville's work, which treats on the mode of prescribing the prussic acid. The chymical qualities of the medicine, and the incompatibles, are described in our review of the first edition, vol. ii. p. 272, and therefore we need not repeat them here. We shall add, however, a page of formulæ from our author.

"No. 2.—*R.* Misturæ amygdalarum f 3 viii.

Acidi Hydrocyanici med. m. x.

Syrupi tolutani f 3 j

M. Cochleare unum maximum sumendum est tertia quæque horâ.

"No. 3.—*R.* Misturæ camphoræ f 3 vi.

Tincturæ digitalis f 3 ss.

Acidi Hydrocyanici med. m. xii.

F. M. Singulis cochlearibus, tertia vel quarta quæque horâ, sumenda.

"No. 4.—*R.* Potassæ subcarbonatis gr. xv.

Cocci cacti gr. viij.

• Acidi Hydrocyanici med. m. x.

Aquæ stillatæ f 3 vj.

F. M. Infantibus, per parva cochlearia mistura, dum urget tussis propinatur: adultis vero, cochleare unum mistura amplius, ter, vel quater de die, exhibetur.



"No. 6.—℞. Decocti cinchonæ lancifoliæ f 3 ii.
Acidi Hydrocyanici med. m. iij.
Spiritus juniperi comp. f 3 ss.
F. Haustus ter quotidæ sumendus.

"No. 8.—℞. Sodæ carbonatis gr. xl.
Cocci cacti gr. v.
Aque stillatæ f 3 vj.
*Terantur optime & solutioni, per chartam bibulam diligen-
ter colatæ, addantur.*
Acidi Hydrocyanici med. m. xii.
Syrupi papaveris f 3 iiss.
F. M. L. A. *Cujus cochlearia iiii. media, cum succi limo-
nis recentioris, opportune edulcorati, f 3 ss. in impetu
effervescentiæ, tertiis horis, hauriantur.*" P. 408-9.

We must now take leave of Dr. Granville's work. We trust, that in the few commentaries which we have made, Dr. Granville will not find any tincture of cavilling criticism or arrogant dogmatism. Our observations have been chiefly argumentative; and whenever our author shows us that we are wrong, we shall submit to superior reasoning. If we have been sparing of censure, we have been still more so of eulogium. Those are not always our sincerest friends, who are loudest in our praises. While we can make allowances for the partialities of an inventor or reviver of a favourite remedy, we think it the most friendly act to draw the author's attention *repeatedly* towards the fallacious nature of medical evidence, as proved by all historical records. At the same time, we are not among those who discourage the introduction of every *new* remedy as a dangerous innovation.

We are, however, clearly of opinion, that the profession are under deep obligations to Dr. Granville, of whose talents we entertain a very high opinion, for perseveringly bringing a medicine before the public in this country, which promises to hold some rank among our potent medicinal preparations.

XIV.

I. *A Statement of Facts, tending to establish an Estimate of the true value and present state of Vaccination.* By Sir GILBERT BLANE, Bart. &c. &c. London. T. and G. Underwood.

II. *Copy of the Report to the Secretary of State for the Home Department, from the National Vaccine Establishment; dated the 18th of May, 1820.*

III. *Circular, addressed to Practitioners in general, respecting Varieties and Modifications of the Vaccine Pustules, occasioned by Herpetic and other Eruptive states of the Skin.* By E. JENNER, M. D. &c. &c. 1821.

WHEN two individuals commence opposite trains of reasoning on subjects of medical science, it is not very rare for both to find that they have proceeded by that erroneous process which, after a great expenditure of words, terminates in their arriving at the post from which they started,—and discovering that the only mode which can bring the question to any issue at all, is precisely such as will admit of no manner of contention. Facts, says Lord Bacon, are the prelusions to stability. Sir G. Blane's paper is a specification of these, with as little speculation, or imagination, as any thing we have seen. It was first published in the *Medico-Chirurgical Transactions*, but as it would there have gravely reposed "above the limits of a vulgar fate," it has been wisely translated into a more vendible and locomotive form, and we trust, for the sake of truth, that it will make an extensive excursion throughout the inquisitive ranks of society in all parts of the globe.

The object of this excellent paper, is to prove the sensible effects of vaccination in diminishing the mortality from small-pox and, previous to advancing any proofs of which, Sir Gilbert very candidly appreciates the claims of variolus inoculation:—

"But it has no tendency, like vaccination, to extirpate the disease, and from the impossibility of rendering it universal, it has actually been found to add to the general mortality of small-pox, by opening a new source for the diffusion of its virus."*

To effect his main object, a comparison of the mortality of small-pox, as influenced by vaccination as well as by ino-

* We may not inaptly ask those who may think highly of the innocence of small-pox inoculation, whether the great fire of London might not have been caused by kindling a few shavings?*

* See Report.

culatation from itself, he selects from the bills of mortality four periods, each of fifteen years, for the purpose of exhibiting the mortality of small-pox in each of these series in regard to each other. The result of these computations stands as follows.

“Ratio of the mortality of small-pox to the total mortality,
 From 1706 to 1720; one in 12.7; that is 78 in 1000
 — 1745 to 1759; one in 11.2; that is 89 in 1000
 — 1785 to 1798; one in 10.6; that is 94 in 1000
 — 1804 to 1818; one in 18.9; that is 53 in 1000” P. 5.

Fractions are not noticed in the last column of numbers.

There is one fallacious inference which might naturally follow the consideration of this estimate, viz.

“That the proportion of deaths from small-pox, to the total mortality, increased in the course of the last century; so that inoculation appears to have added to the mortality.”

This, however, is not exactly fair, for “in the course of that century the general mortality itself was greatly diminished in relation to the population.”

The diminution is attributed to the preservation of infant life under the age of two years;—

“Owing chiefly to the improvements in ventilation and cleanliness, but greatly also to the laying aside the custom of exposing them to the open air in winter and early in spring; either from inadvertency, or from the false notion of rendering them hardy, whereas they catch inflammation of the lungs. Nothing tends more to the health, strength, and growth of children, than genial warmth. It seems chiefly owing to the great plenty and cheapness of fuel, that the race of people in Lancashire are so superior in their form and size. In Buckinghamshire, on the contrary, where the fuel is extremely scanty and dear, the race of people is small and puny, inso-much that it is provided by act of parliament that men should be admitted into the militia of smaller stature in this than other counties.”

Sir G. consequently considers that the relative mortality of small-pox to the total mortality should be viewed in its proportion to the increase or decrease of population. As the population of the metropolis nearly doubled in the last century, it might be thought that it had decreased, but this increase having ensued in the parishes of Mary-le-bone and St. Pancras, *without* the bills, and the increase in the west, being caused by migration from the east, &c. the offset is such that,—“the addition to the population, if any, *within* the bills of mortality, does not seem to be so considerable as to affect the computation.”

Thence it would appear, that inoculation did not add so much to metropolitan mortality; but it is also clear that it

had that effect in situations where pestilence was introduced by the zeal for inoculation.—Assuming that the given proportions of variolous deaths had proceeded unchecked by vaccination, it results from these calculations, that the very reverse of the following proposition must have been afforded.

“Even under the very imperfect practice of vaccination which has taken place in this metropolis, 23134 lives have been saved in the last fifteen years, according to the best computation that the data afford.” 7.

A fluctuating mortality from small-pox continues open to every grade in the scale, from loose habits of perpetuating inoculation in the small-pox hospitals, as the increase of deaths in 1805 exhibits.* Sir G. Blane then accumulates abundant “irrefragable historical evidence” to prove the competence of vaccination to total extirpation of small-pox, a point which he labours with as much force of reasoning as felicity of language.

Small-pox, by recurrence, affords an occasional violation of a general rule; the exceptions after vaccination are probably more frequent still, and instead of forming an objection, must be considered by great minds as an urgent reason for universality of vaccination, which would enclose those within the boundaries of protection, whose susceptibilities are peculiar, if such susceptibilities have actual existence. Small-pox, in continuation of this argument, destroys a hundred “for every one that perishes by the plague;” it is therefore the “greatest known scourge.” Some of the soundest political economists allege—

“That small-pox does not diminish the numbers of mankind, nor vaccination increase them; for population is determined by subsistence, and the indefinite powers of procreation soon repair the ravages of disease. But however true this may be, the miseries incident to so many of those who survive small-pox, whereby they become a burden to themselves, their families, and to society, render this disease incontrovertibly an evil of the first magnitude,—not to mention the intense sufferings and afflictions inseparable from it.”

Our author justly laments the inefficacy of legislative regulations to restrain inoculation, and indiscriminate exposure of inoculated individuals in the general community. We have passed our comments on this, in the review of Mr. Cross’s valuable book, and we cannot but lament the kind of spirit and intelligence, which has been of late displayed by a

* “Seven hundred and twelve persons are reported by the bills of mortality of London, to have died of small-pox within the last year.”—*Rep.* p. 3.
—*Sir G. Blane’s Statement*, p. 14.

magistrate at a public office, when applied to upon an illegal transaction of this nature.*

After the demonstration of the possibility of extirpation, it remains to be asked whether alleged failures operate to render the practice inexpedient.† This resolves itself into an inquiry into the history of these failures.

"The fifth day is the most common limit of this disorder, it sometimes stops short on the third; sometimes not till the sixth or seventh; and in a very few cases it has been known to run the common course of small-pox. What forms the strong line of distinction from proper small-pox, is that, with a few exceptions, it does not advance to maturation and secondary fever, which is the only period of danger. I am not prepared to deny that death may have occurred in a few instances; nay, there seems sufficient evidence that it actually has; but these adverse cases are so rare, as not to form the shadow of an objection to the expediency of the general practice." P. 11.

The replies made to Sir Gilbert, at a meeting of those "extensive and eminent practitioners" who form the Medico-Chirurgical Society, furnishing his inquiries with *two* fatal cases only, of after small-pox, are very decisive and satisfactory, and render it more extraordinary that the exception should ever become the rule with men of judgment.

We shall not pause long on the arguments for universal vaccination; for however we may be fascinated for a moment with the helpful ornament which the writer hath lent to the conclusion of this important question, we see but a thousandth repetition of that half-coaxing and half-boring persuasion which avails so little with our countrymen. We would fain hope that the attainment of the *maximum*, that is, total extirpation, should not be impracticable and hopeless, and that the unceasing havoc of small-pox would yet cease to affect the destinies of the world; and we feel that the utility of vaccination in the army and navy has shown us what may be reasonably expected from such a vigorous effort in private practice.

"Their example has been by no means followed among the civil population of England." No! nor ever will, unless one hundred years of slavery, which we would be the last to propose, should bring over some modification of the national character. But the most enlightened, wise, and reflecting people in the world, are very suspicious of all schemes for their benefit, and never approve of gratuitous advantages. John Bull hates to be taught, and thinks obstinacy his great-

* Bow-Street Report, Morning Chronicle, Dec. 28, 1820.

† Report, p. 3.

the virtue. We will indulge, however, in a single *argumentum ad hominem*, and give him the irreverend counsel of his sagacious, though never very cordial, friend from the other side of Tweed—"get rid of the De'el, man, and there will soon be no Lord." This repartee, which we quote more for its wit than piety, may be precisely applied to vaccination; and if those who are inimical to its interests, would only unite with its friends in making its diffusion complete, we are sensible that the frequent demands for it would soon cease to grieve the eye of the former.

A late emanation from the masters and court of assistants of the Royal College of Surgeons, is a measure of which we cannot but approve, renewing their engagements to persevere in exclusive vaccination, and recommending the same conduct to their ordinary members. The Board of the National Vaccine Establishment has undertaken to circulate these through the medium of their various members throughout the united kingdom; and, considering the severe test which vaccination has surmounted, why should there not be corresponding resolutions formed by all the county-hospitals, dispensaries, and other provincial institutions, tending to recommend their example to their neighbours, to extend the practice of vaccination, to win back the disingenuous, and support the weak and irresolute. An association of this nature, called the Gloucestershire Vaccine Association, for promoting cow-pox and discouraging small-pox inoculation, was formed at Gloucester, in April, 1810, consisting of the sixty-three most eminent medical men in the county. At the head of this body stood a man of powerful faculties and comprehensive views, Dr. Baron, who, while others gazed supinely or submitted ingloriously to fatality, formed a circumvallation around him, which, if it had continued well defended, would never have been passed again by the invading enemy.* Such measures might restrain inoculation, more effectually than acts of legislation; for there are many instances in which a man is more deterred from doing wrong by his pride than moral sense.

The report of the Board for 1819, published May, 1820, states, that "the practice of vaccination in his majesty's dominions continues to advance, notwithstanding many unfavourable occurrences." Gloucester, which is stated to have

* See Edinburgh Medical Journal (about this period) containing the resolutions, recommending vaccination exclusively, except in cases of extreme necessity; for example, if the small-pox breaks out among persons who have never had that disease, where no vaccine matter can be obtained.

been free from small-pox since the year 1817, by the report, has lately, however, exhibited some disgraceful spectacles.

"The boroughs of Clonmell and Newton Limavady, in Ireland, and Mothvey, in Carmarthenshire, with the whole country for twenty miles around it, are reported to have completely succeeded in the extirpation of the small-pox; and in the island of Guernsey only one solitary case of that fatal distemper is known to have occurred during the last year."

Exotic vaccination thrives prodigiously, legal enactments having extinguished small-pox in Denmark for the last eight years. These enactments are extended to the Danish West India colonies. Austria has nearly extirpated it, and the circle of Rezat, in Bavaria, containing half a million of people, *entirely* since 1807. Some proofs are given of the *life-long security** of vaccination. The report also shows that 30,000 *vaccinés* in five different counties have furnished *no* exception. The register of the Small-Pox Hospital of London furnishes one exception out of 46,662 cases; the Foundling Hospital out of 19 years vaccination, two mild cases; Royal Military Asylum none; the National Vaccine Establishment, out of 60,000, reports five. Having represented the favourable side of the profile, they point out the event of great numbers of vaccinated persons having had varioloid affections, twenty-one cases of secondary small-pox, and many of small-pox after neither, proving very fatal, "attributable to the neglect of universal vaccination," and the "too frequent practice of small-pox inoculation." The failures of vaccination and variolation are in part attributed to "certain peculiarities of constitution, that will exempt some individuals from all common laws." One word to the wise, as to these rare susceptibilities and failures, without entering into the grand question, in what manner varioloids are made, for which there is neither time nor place at present. Let us examine, for a moment, the ordinary mode of reporting these *infortunia*;—vaccination was done by such a person, perhaps a celebrated surgeon; this is a common answer after a failure,

* Sir G. Blane seems inclined to admit the omnipotency of time in weakening the virtue of vaccination, as well as of other things. The laws of the human constitution are full of diversity, but we are as yet reluctant to admit that which is as much at variance with the analogies of small-pox inoculation, as with much direct evidence. Perhaps these exceptions, from which a legal personage was pleased to term vaccination a lease for a term of years only, may very probably arise out of some of the minute impediments which attend the process of vaccination. We believe we have heard that the discoverer has been able to detect the cause.

and general celebrity is, of course, a satisfactory proof of minute and particular knowledge. "Peculiarities of constitution" is another *say-something*, but this must be owing to a cause; cutaneous diseases were pointed out as impediments, by Dr. Jenner, as early as 1804; but, by some means or other, his precautions have been but little attended to, so that we find them repeated in 1821. Dr. Jenner, in the London Medical and Physical Journal of August, 1804, in Dr. Willan's Essay on Vaccination, and in an appendix to Dr. Wilson Philip's work on Febrile Diseases, stated that certain cuticular affections have the property of creating such deviations as limit, or wholly counteract, security. If such deviations are formed, where does the principal terminate? not within a very narrow compass. We have seen these facts repeatedly illustrated, and feel almost shocked at that neglect of minutiae in this respect, which is so unpardonable in men of science, and attention to which generally constitutes the perfection of skill in our profession. Mr. Cross gives five cases of small-pox after vaccination in his work, out of which three establish Dr. Jenner's positions.* We here briefly analyze the whole 1st Case. Regular distinct small-pox after vaccination—vaccinated three or four years before "by an eminent surgeon, who believed the cow-pox to be satisfactory." "Two, vaccinated children from the same family were inoculated from him without effect." 2d Case, similar.—"Five others of the same family had been vaccinated, and were unaffected by the contagion." 3d Case.—"The mother states, that several pimples came out upon the right arm at the time of vaccination, one of which has left a slight scar. There is a large scar from vaccination." "Her brother, vaccinated ten years, was inoculated from her without inconvenience." 4th Case, Fatal pitechial small-pox. Preceding circumstances precisely similar to the last case. 5th Case, Fatal confluent small-pox. One vaccine vesicle only had been formed, from which ichor was taken to vaccinate others. In the first two cases there is no external evidence of irregularity, but the protection afforded at the same time to other individuals of the same family, prompts us to doubt whether the cause of failure might not have been obviated—and why should super-vaccination ever be neglected? In the 3d and 4th cases eruptions are stated to have appeared, and scarred simultaneously with vaccination; the original vaccine vesicle leaving a broad scar.—These eruptions which pre-existed in the constitution, be-

* Pp. 58 to 65.



came coincident in development with the vaccine vesicle, and it generally happens that if they are not subdued before or during the vaccine process, the vaccine vesicle may be so far rendered incorrect, by a reciprocal process, which alters the secreting action of both, that imperfect security results. The large "scars," in these two cases of failure, instead of denoting increased security, as ignorance imagines, are truly emblematic of the rambling deviation of the vaccine pustule, under the influence of eruptive diseases, unless in those cases where a very broad shining superficial mark is produced by rubbing off the scab in the last stages, which is generally level with the cuticle, and is evidently cuticular only. How can we be surprised at small-pox after vaccination, when it was the custom for years to confide in one vesicle, and to alter its course by robbing that to inoculate others?—*V. Case 5.*

We hope that this short article will be found to contain some useful practical intelligence, and much compressed analysis. At all events, we regard it favourable to the interests of vaccination, that the clamorous effusions of party are changing into the cool discussions of men of science.

XV.

History and Method of Cure of the various Species of Palsy; being the first part of the second volume of a Treatise on Nervous Diseases. By JOHN COOKE, M.D. F.A.S. Fellow of the Royal College of Physicians, and late Physician to the London Hospital. Octavo, pp. 215. London, 1821.

ERUDITION and talent, when confined to the individual, are nearly as useless to the community at large, as though they did not exist. They are like a river that takes a subterraneous course, and is known only to its own dark and solitary channels. But when they are made subservient to the general diffusion of knowledge, through the medium of the press, they are like a river winding beneath a fervid sun, through a thirsty country, whose branches irrigate the surrounding plains, permeate the arid soil, and scatter fertility over the face of nature. There is, moreover, in the intellectual, as well as in the physical world, a moral obligation imposed on the favoured few, to extend a portion of the fruits of their endowments and acquirements to the indigent many—an extension which, in the medical profession particularly, is productive of the most beneficial consequences, not only to the profession itself, but to society at large.

The annals of medicine, ancient and modern, pregnant as they are with the most valuable information, are yet, from
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their vast extent, and the languages in which they are recorded, almost completely inaccessible to nine-tenths of medical practitioners. Hence it is, that the great mass of medical society enter on the actual duties of their profession with but a scanty stock of medical lore—namely, that which they have hastily noted down in the lecture room—picked up during the hurried movements of hospital practice—or purchased, on leaving the seats of education, in the shape of a few stock books, as they are not inaptly termed by the biblioplists.

Now we are far from censuring this state of things, for really we know not how it can be otherwise under existing circumstances. But we are clearly of opinion that the man who, selecting some important class of diseases, lays open to us the stores of information, ancient and modern, collected or recorded on that particular subject—and that in a form and language accessible to all ranks of the profession, performs a great service to the rising generation—ay, and to no small proportion of those who consider themselves *melioris notæ* in the republic of medicine. This is the task which Dr. Cooke has undertaken, and his qualifications to execute it are acknowledged by all. His object appears to have been, to extract useful matter, on the subject of which he treats, from all the authors of reputation, of whatever age or country, and thus to communicate their sentiments in plain and perspicuous language. In the present publication our learned author has clothed the matter more in his own words, than in the former volume; and by so doing, he has endeavoured, in several instances, and that with success, to render diffuse passages succinct, and obscure parts of the subject more intelligible. Although Dr. Cooke's work is professedly a compilation, yet he has, on almost all occasions, as we shall show in the sequel, introduced his own opinions and experience; and where he has not presumed to decide between jarring doctrines and modes of treatment, he has almost uniformly stated what he himself would be inclined to adopt or pursue, in such circumstances. The utility of this proceeding is so obvious that it is quite unnecessary for us to dilate upon it. The original communications which our author has received from his friends, particularly Dr. Philip, Mr. Charles Bell, Mr. Cooper, and others, must necessarily enhance the value of the publication; and with these few preliminary remarks we shall proceed to lay before our readers a brief analytical sketch of the work itself, which we doubt not will substantiate the justness of the preceding observations, and induce our readers to cultivate a much closer acquaintance with the original.



The *first* part of Dr. Cooke's second volume contains seven chapters and an appendix, viz. on the general *history* of palsy, hemiplegia, paraplegia, and paralysis partialis—on the *causes* of palsy—diagnosis and prognosis—and on the *treatment* of the disease. The appendix consists of an abstract from the minutes of the Army Medical Board, and an official return of cases of paralysis and apoplexy in the British forces, during a period of six months.

It is not a very easy task to present a connected view of so great a mass of excerpted opinions and observations, especially as the author has rendered the language terse and condensed by the method which he has adopted. Yet as many hundreds of our readers can never have access to the original, we shall endeavour to run a slender *line* of analytical delineation parallel with the great *chain* of the work itself, by which means a degree of communication between its parts may be preserved, and an *ex pede herculeum* sample of the publication exhibited.

After detailing the *definitions* of ancient and modern authors, Dr. Cooke thinks, and we believe justly, that the following sentence may comprehend the chief characteristics of palsy.

“It is a disease in which there is a diminution, or an entire loss, of the power of voluntary motion, or of sensation, or of both, in some particular part or parts of the body, without coma.” P. 3.

Our author remarks, that he has generally found the precursors of palsy to be the same as of apoplexy; namely, vertigo, drowsiness, partial headach, numbness or torpor, loss of memory;—and more especially as forerunners of *palsy*, he has observed “a faltering inarticulate voice, drowsiness, a slight delirium, dimness of sight, or double vision, trembling, a numbness gradually ascending to the head, frequent yawning, weakness, distortion of the mouth, and disposition to faint.”

“Palsy chiefly consists in the loss of the power of voluntary motion, for sensation in a greater or less degree generally remains; nay, in certain cases, it is morbidly increased. I have seen several instances in which paralytic persons have felt very violent pain in the parts affected, particularly in the shoulder and arm. These remarks might be confirmed by quotations from various authors. I never saw a case of palsy in which sensation was entirely lost; and an eminent physician of great experience asserts that a total loss of feeling in this disease is extremely rare.” 5.

The vital and natural functions are generally but little affected in palsy. The opinion is very commonly received that the temperature of paralytic parts is below that of health.

Dr. Abercrombie is of different sentiments. He thinks, that the power of preserving a medium temperature is partially lost by paralytic limbs, so that they are more heated when exposed to heat, and more chilled when exposed to cold, than parts in a state of health. He illustrates this by the following fact:—

“ A medical gentleman, on visiting a paralytic patient, was astonished to find the paralytic arm so intensely hot that he could not touch it. He was at first very much surprised ; but found, upon inquiry, that the patient had, by the advice of a friend, applied to the arm a quantity of very hot bran, or something of that kind very hot, which had been removed a short time before his visit.” 8.

Dr. Cooke remarks, that if this were generally the case, the temperature of paralytic parts ought to be always less than that of other parts, in these climates where the medium temperature of the air is far below human heat. Paralytic limbs often grow more soft and flaccid than natural, as well as wasted, and sometimes œdematous. Mr. Charles Bell informs our author that he has observed the nerves themselves, in such cases, lose much of their substance.

In this unhappy class of complaints, the energies of the mind are often much weakened—the memory, especially, is much impaired—sometimes partially so ; curious examples of which are quoted from Galen and others.

“ The passions of the mind are sometimes greatly affected by palsy. Persons naturally mild and placid, have become peevish and irritable under its influence ; and sometimes a change of an opposite nature has been caused by it. I had several years ago an opportunity of seeing an illustration of this remark, in the case of a much respected friend. The person to whom I allude, had always, up to an advanced age, shown an irascible and irritable disposition ; but after an attack of palsy, his temper became perfectly placid, and remained so until his death, about two years afterward.” 12.

In persons recovering from palsy, Dr. Cooke has often observed, that the parts most distant from the head are first restored. In hemiplegia it almost always happens that the leg recovers its power long before the arm. Our author adopts Dr. Cullen’s nosological division of the disease into hemiplegia, paraplegia, and partialis.

I. History of Hemiplegia. This term does not occur in the writings of Hippocrates, Galen, or Aretæus. Paulus Ægineta appears to have been the first to designate this species of palsy. It is preceded, in a great proportion of cases, by apoplexy, but sometimes so slight as to escape notice. Dr. Cooke here brings forward a great number of hemiple-

giac anomalies, if he may use the term, as well calculated to illustrate the history and nature of the disease. For these we must refer our readers to the work itself, from page 18 to 32.

"Hemiplegia sometimes terminates in a few days, but much more frequently the progress towards recovery is very slow. It often happens that an amendment to a considerable degree takes place, and then the disease remains stationary for months, or even for years: thus we frequently see persons, who have been attacked by hemiplegia, so far recovered as to be able to walk in an imperfect manner, one leg being dragged, with the foot turned out, without making any material further progress towards the healthy state." 33.

In some cases, however, the patient makes no improvement, is confined to bed, and dies gradually exhausted—"raro ad sanitatem superveniunt, et plerumque miserum spiritum trahunt, memoria quoque amissa." *Celsus*. The most distressing state, as Dr. Heberden observes, of this disorder, is that in which the powers of the mind are in the highest degree debilitated, and the passions become ungovernable, leading almost to madness, so that a person survives himself, as it were, and is reduced to a state of the utmost misery, if conscious of it—being unable to stand, to speak, to feed himself, or to retain the *fæces* or urine, yet continuing thus to live a burden to himself and all his friends.

II. Paraplegia. In this species of palsy, the superior parts of the body are seldom affected, unless the causes are seated in the upper parts of the spine. Galen appears to have been aware of this fact.

"If the spinal marrow, he says, be affected about the fifth vertebra, the hands will be wholly deprived of sense and motion; if about the sixth, the paralytic affection of them will be more partial, &c. and if below the eighth, they will not be affected at all." 83.

The paraplegia depending upon a diseased state of the spine and its connexions, is by far the most frequent. It is produced sometimes by mechanical injuries; but more generally it takes place gradually and constitutionally, especially in children.

"This disorder generally comes on slowly, and is preceded by languor, listlessness, and weakness in the knees. As it advances, a difficulty in properly directing the feet is experienced, and an involuntary crossing of the legs, with frequent tripping or stumbling are observable, and the legs or thighs are found to have lost a good deal of their sensibility, and to have become useless for the purposes of motion. When an adult is the patient, the progress of the distemper is much the same, but rather quicker." 39.

The paraplegia depending on an affection of the brain has been pointed out by Dr. Abercrombie, and more recently by Dr. Baillie, as we showed in our last Number. Dr. Cooke has seen some cases where paralytic affections of the arms were occasioned by some complaint in the head; but does not recollect to have seen, in an adult, a loss of power in the lower extremities from that cause, and marked by the train of symptoms described by Dr. Baillie, whose accuracy of observation, however, is unquestionable. The anomalies of this species are very few, and only one is introduced, communicated by Dr. Hutchinson; but, dissection not being allowed, the case is imperfect.

III. *Paralysis Partialis* is that species which affects less than half the body—or some one particular part or organ. They may be considered as consisting in a want of sensation or of motion. Examples of the *first* we see in paralytic affections of the olfactory nerves, retina, gustatory nerves, auditory nerves, and nerves of touch:—of the *second*, in want of motion in the eyelids, muscles of deglutition, organs of speech, urinary bladder, or in particular parts from the effects of lead. The vital organs are rarely affected in this way, being carefully guarded against such accidents, not only by the situation of the nerves of these organs, but by their own inherent powers.

After enumerating and exemplifying the various kinds of partial palsies, Dr. Cook briefly notices the question often agitated by physiologists how it happens that *motion* is sometimes lost, while *sensation* remains, and *vice versa*, if both functions are performed by the same nerves? The question puzzled Galen, as it had done Erasistratus and Herophilus long before him. It has since puzzled Forestus, Haller, Van Swieten, Sauvages, &c. Recent physiologists seem to have abandoned the hope of a solution. We shall introduce, however, the sentiments of two living authors of the present day.

“Dr. Wilson Philip, in compliance with my request, has given me his opinion upon it. Dr. Philip, who has carefully studied the nervous system, says, ‘I think we must admit that the bundles of nerves, going directly from the brain or spinal marrow to any part of the body, contain nerves of two descriptions, one set adapted to convey the dictates of the will, the other to convey impressions from the part to the sensorium. This I think more probable, than that impressions move backwards and forwards in actually the same channels; one of these opinions must be correct. If the former is so, there is no difficulty in accounting for the feeling being lost, and the power of motion remaining, and *vice versa*. Indeed these phenomena of disease seem to me to go some way towards proving



the former opinion. These observations may perhaps be applied to all nerves ; but in other respects the ganglion nerves seem to obey laws very different from those which come directly from the brain and spinal marrow.*

“ Mr. Charles Bell, whose physiological opinions deserve great attention, has also, in compliance with my desire, favoured me with his sentiments on this question. ‘ The nerves of sensation and motion,’ he says, ‘ are bound together in the same membranes, for the convenience of distribution; but there is reason to conclude that they are distinct through their whole course, and as distinct in their origin in the brain, as in their final distribution to the skin and muscles ; why then should we suppose that they are similarly affected in diseases of the brain. Even nerves of the same class, viz. the nerves of voluntary motion, are not affected in the same degree by disorder of the brain. When there is effusion upon the membranes of the brain, from excessive inebriety, or dropsical effusion of any kind, the muscles are influenced unequally ; and it is remarkable that those muscles, and consequently those nerves, which are immediately under the influence of the will, are first affected or debilitated in the greatest degree, where there is a general disturbance of the brain. The slighter disorders affect the muscles of the eyes ; in a greater degree, we shall see palsy of the face ; in a still greater degree, we find the muscles of the limbs unequal to their office. The muscles of respiration are next affected ; and the fibres of the hollow viscera retain their office whilst there is life. If nerves of voluntary motion are thus differently affected according to the distinction of their functions, we need not be surprised that nerves, in all respects so distinct as those of motion and sensation, should be differently affected by what appears to us a general and uniform affection of the brain.” 58.

Dr. Cooke justly remarks upon these opinions that, until we can demonstrate the distinction between nerves of sense and nerves of motion (excepting in the eye and tongue where the distinction is evident) the question must be considered as involved in great obscurity, although the analogies above-mentioned are certainly greatly in favour of different sets of nerves for the two different functions.*

IV. *Etiology.* Some of the principal *predisposing* causes

* May not the function of a nerve depend upon the peculiarity of its structure where it *terminates* in an organ ; as in the liver, where it regulates the secretion of bile ; in the pancreas, the pancreatic secretion ; in the kidney, the urine, &c. ? We can discover no difference of structure in nerves going to different organs ; one nerve sometimes distributing branches to organs of very different function. May not, therefore, the arrangement of the nervous filaments in the skin and other sensible parts, be peculiarly adapted for the function of sensation, without supposing the necessity of two different sets—one for motion, the other for feeling ?—*Rev.*

of palsy, must be the same as those of apoplexy, enumerated and explained in Dr. Cooke's first volume, and treated of in this Series, No. I. p. 4, *et seq.* and the same may be said of the exciting causes. With the exception of paraplegia, paralytic affections, in general, occur in advanced age, especially in constitutions weakened by disease. Dr. Gordon's report from the Army Medical Board states, the chief exciting causes of apoplexy and palsy among the military to be, intoxication, exposure to the sun, drinking cold water, and bathing in the same—and that a predisposition to the disease is laid by long-continued attacks of fever, visceral diseases, epilepsy, and dysentery. The hemiplegic form being almost invariably preceded by an apoplectic fit, of greater or less duration or violence, "the causes, therefore, of both are the same."

Dr. Cooke details at considerable length the experiments of Dr. Serres, of whose pathological researches we gave a full account in our eclectic article on apoplexy. Of the *experiments*, however, we did not give an account, because we did not deem them quite conclusive, and we are glad to see that Dr. C. appears of a similar way of thinking. Indeed, he introduces a series of observations on this subject, which we are tempted to extract rather than abbreviate.

"The observations of M. Serres, and the facts which he has adduced, are highly worthy of our attention; and great credit ought to be given to him for his diligence in improving the peculiar opportunities for information which he enjoyed; but I think the conclusions which he has drawn from his reasoning are too general, and by no means strictly logical. He states, that he has, in many instances, thrown blood upon, and into the meninges, the cavities, and the substance of the brain, without producing apoplexy, or even somnolency; that upon the examination of a very great number of persons after death from apoplexy, he has found the meninges bearing evident marks of irritation (inflammation,) accompanied with effusions of various kinds, and in various situations within the cranium; that sometimes he has observed the brain itself to have been injured in its substance, but without effusion; that in the former cases he has ascertained the preceding apoplexy to have been simple; and in the latter, combined with palsy; and that he has known many cases of apoplexy without effusion, and of effusion without apoplexy: and hence he concludes that he has overturned the doctrine of apoplexy and palsy from pressure, and has established a better system respecting the distinctions and nature of the diseases, than any hitherto presented to the world: but the accuracy of one of these conclusions, at least, may, I think, be reasonably doubted.

"If M. Serres chooses to denominate those apoplexies *meningeal* in which the meninges appear to have been diseased, accompanied with effusion, the brain being in a sound state, and those *cerebral* in

which there is no effusion, but the brain itself is disordered ; if M. Serres chooses to make this division of the disease, I see no objection : perhaps it is better than that of sanguineous and serous. But, though physiologists may approve of his distinctions, I much doubt whether they will be disposed to admit that he has overturned the doctrine of apoplexy and palsy from pressure.

“ He has shown that blood has been effused in various situations within the cranium, without apoplexy ; but he cannot hence fairly conclude that effusion never produces the disease. Since he admits that there is effusion in the meningeal apoplexy, how can he prove, even allowing it to be the consequence of what he calls irritation of the meninges, that the irritation, and not the effusion, is the immediate exciting cause of the disease. If compression by fluids were the cause of apoplexy, M. Serres says there could be no apoplexy without effusion ; but the want of logical precision here is evident, unless we grant, what I believe few physiologists would admit, that compression from fluids is the *only* cause of the disease. That some degree of pressure may be made on the brain without producing either coma or apoplexy, may be conceded as proved by M. Serres’s experiments ; but it by no means follows that a different or greater pressure would not produce these diseases ; indeed, both observation and experiment decidedly show, that compression does sometimes, according to its degree, give occasion, first to somnolency, and then to complete apoplexy. It is a fact perfectly well known, that after the operation of the trepan, pressure on the part deprived of cranium produces these effects : and innumerable instances might be adduced in which compression by depressed bone after accidents, has given occasion to coma and apoplexy.

“ These observations are confirmed by direct experiments, which lead to positive conclusions ; not to negative conclusions, like those of M. Serres. M. Portal trepanned the cranium of a dog ; he compressed the dura mater and the brain, sometimes with his fingers, and sometimes with a bouchon of linen or of wood, and sometimes by water or mercury poured through the cavity made in the cranium. A funnel was adapted to the opening of the cranium, which was filled with water or mercury, so as to produce a graduated compression, more or less strong, upon the brain. In whatever way the experiment was made, it instantly produced the following effects—The animal ceased to bark ; if the compression was increased, it became agitated by strong convulsions ; if still further increased, a profound sleep took place, the convulsions ceased, and the respiration became stertorous. If the pressure was diminished, the breathing became more free, and the convulsions returned. This experiment was very often repeated by M. Portal, and always with the same results, except where the compression of the brain had been so strong, that its substance had been weighed down, *affaissée*.*

* Portal, Cours de Physiologie Experimentale, p. 248.

"Mr. Astley Cooper has been kind enough to give me an account of an experiment which he made upon a dog, with a view to ascertain what degree of pressure the brain could bear, which in part confirms M. Portal's experiment. He trepanned a dog, and detached the dura mater in a circle from the inner table of the skull, to the extent of half an inch. He then pressed upon the dura mater, so as to depress it about the fourth part of an inch, and the dog exhibited no signs of uneasiness. He then pressed upon it to half an inch of depression, and the animal showed great signs of uneasiness, endeavouring to escape from his grasp with all his efforts : he then pressed to three quarters of an inch, and the animal became torpid, breathed laboriously, and according to the declaration of Mr. Davie, who assisted him in the experiment, the pulse became slow and irregular. Suddenly he removed the pressure, and in half a minute the animal started from the table, turned several times round, as if giddy, and then staggered away." 88.

Keeping these observations in view, our very able author properly asks if, in a case of apoplexy, preceded by the usual symptoms, we should find, *post mortem*, a quantity of blood effused, without any other disease, (many instances of which are on record) would it not be reasonable to conclude that the effused blood first produced vertigo, or somnolency, and afterward, by its increase, a complete fit of apoplexy?—We would answer, yes. Our author thinks, perhaps justly too, (although against our own creed) that we err, both in attributing apoplexy *always* and *never* to pressure, as physiologists of opposite systems have done. Dr. Cooke has no doubt, however, "that in the generality of cases, apoplexy is produced by general, and palsy by partial compression." In this sentiment we fully coincide.

From hemiplegia, our author comes to paraplegia, and partial palsy. Paraplegia, he observes, in a great proportion of cases, is produced by morbid affections of the spine and its connexions, coming on slowly, and depending upon a constitutional disease. The cause is also sometimes seated in the head, as shown by Dr. Ballie, Dr. Abercrombie, and others.

"A diseased state of the spine, and its connexions, commonly produces paralytic affections of the lower extremities ; but if the injury be in the higher parts of the vertebral column, the muscles of the superior extremities sometimes are also affected, and even general palsy may be thus produced." .93.

The causes of partial palsies are numerous and various—sometimes seated in the head—sometimes the spine—sometimes, and Dr. C. thinks most frequently, in the nerves themselves. This disease occasionally depends on inflammatory action in the brain, or in the paralyzed parts, often accom-

panied with pain. The two following cases, communicated by Dr. Abercrombie and Mr. Charles Bell, we shall insert here.

“ Dr. Abercrombie, in his communication to me, describes a case of much paralytic disease from a circumscribed morbid cause in the head. ‘ A gentleman, aged 33, was seized with numbness and slight palsy of the left side, the numbness affecting also the left side of the face, the line being drawn with the utmost precision along the centre of the nose. He had no headach, and the pulse was natural. He was largely bled, and the affection went off in a few days ; but from this time he was observed to be less acute in business, his memory was impaired, and he sometimes complained of his head. After three months, he was observed one day more confused and forgetful than usual, and in the night was seized with perfect apoplexy, which was fatal in twenty hours. On dissection, every part of the brain was found in the most healthy state, except that in the centre of the right corpus striatum there was an abscess, regularly and nicely defined, no bigger than would have contained a small pea. In the lower part of the left corpus striatum there was a more irregular suppuration of great fœtor extending over a space about the size of a small bean. There was no serous effusion, and no other morbid appearance of any kind.

“ Mr. C. Bell has described to me a case of partial palsy, with great debility, preceded by inflammation of a nerve, accompanied with excruciating pain. In this instance, the inflammation was in the ulnar and fibular nerves, and the pain, which was of the most agonizing kind, had confined the patient for two years, and had quite subdued a powerful frame. He had in vain sought relief, says Mr. Bell, from some of our most distinguished friends, and he was left in a state of despair. Observing that the pain was confined to certain parts of the hands and feet, and that a distinct class of muscles were become paralytic and shrunk, Mr. Bell’s attention was directed to the corresponding nerves, and he found them tender, and acutely sensible to the slightest pressure. The accessions of pain were periodical and alternating, the feet being generally first attacked, and afterward the hands. By repeated purging, and the application of leeches along the course of the nerves, together with other remedies to be described when I speak of the treatment of partial palsy, this patient was restored to health.” 93.

Mr. Bell includes among the causes of partial palsy, long-continued exercise of particular muscles, or violence done to them—also irritation in the bowels, especially among the children of the poor. We saw, a few years ago, an officer of rank, who always lost the power of speech, and sometimes of sight, whenever the gastric, biliary, and intestinal secretions were much disordered. We have repeatedly seen him become speechless in the middle of his dinner, when he could only make signs to his surgeon, who, on those occasions,

gave him what this officer used afterward facetiously to call the "doctor's thunderbolts," namely, brisk purgative pills of calomel and extract of colocynth, which invariably dissipated the paralytic affection as soon as they began to operate.

Here our author notices the fumes or effluvia of metals, particularly lead, as well-known causes of partial paralysis. Dr. Cooke was lately consulted by a gentleman who had a paralytic affection of one side of the face, without any assignable cause. On inquiry, however, it was found that he had slept two or three nights in a room where the bed was placed near a closet, the door of which had been recently painted, what is called a dead white. The external application of lead, even in its metallic form, has occasioned palsy.

"A person, a few years ago, was admitted into St. Bartholomew's Hospital, under the care of Dr. Powell, who was affected with palsy from this cause in a very extraordinary degree. The patient, who was a painter, was totally regardless of cleanliness in his business, and was in the habit of wiping his brush on the sleeves of his coat, so that he was particularly exposed to the fumes of the paint which he used. In this case, not only the hands of the patient were paralytic, but also the lower extremities, and the sphincter muscles of the bladder, so that he could not retain his urine." 104.

We must here pass over a great deal respecting the etiology of the disease under consideration, and also much interesting matter collected from various quarters respecting that curious phenomenon in palsy, namely, the opposite sites of cause and effect—the one being almost invariably seated in the right side when the other is in the left, and *vice versa*. Of all the explanations hitherto given, that of the *decussation of nerves in the brain*, particularly in the tuber annulare, though not satisfactorily demonstrated, appears to our author to be the most probable.

V. Dissections, Diagnosis, Prognosis. The most mortem appearances in palsy very much resemble those after apoplexy, which have been described in Dr. Cooke's first volume, and also in the first No. of this series of our Journal. In this publication, however, Dr. Cooke has given a neat account of the pathological investigations of M. Serres, Riobé, Rochoux, and other late continental writers, with whom our readers are pretty familiar from the extracts we made in our article on apoplexy. The diagnosis, as our author remarks, is so clear that there can be no danger of confounding this disease with any other.

On the subject of PROGNOSIS there is much variety of opinion. The ancients, in general, considered palsies of long

standing as incurable. Dr. Abercrombie, however, takes a more encouraging view of the subject, and thinks we have probably been too much in the habit of considering paralysis of long standing as depending on fixed and irremediable disease of the brain. Many cases, he observes, are on record, which lead to shake this opinion—some recovering very gradually, and, in a few weeks or months, leaving no trace of the disease. Dr. A. has not given us any marks by which we can discriminate these favourable from the more unfortunate cases. We fear that the following prognosis of our able author will prove too rigorously correct.

“As far as my own experience enables me to judge, the prognosis in the general palsies, must be almost always unfavourable. I have seen many cases of recovery from palsy in a very considerable degree; but I do not recollect more than one or two cases of a complete restoration, both of sensation and motion, in the whole of the side of a person who had been affected with a perfect hemiplegia. When this species of palsy depends upon an injury done to one side of the brain, which is almost always the case, I am inclined to think that the mischief is seldom, if ever, entirely obliterated, and the disease wholly removed. On the dissection of persons after palsy, either evident disease is found in the brain, or marks of the existence of former disease, which had given occasion to the complaint; and although Messrs. Rochoux and Riobé have adduced good reasons for believing that fluids effused have been absorbed, and that cavities in the brain have been sometimes closed, yet the mischief may not have been completely removed, nor the brain perfectly restored to its healthy state; and whilst any morbid cause capable of producing palsy continues in any degree to exist, it is natural to imagine that palsy in some degree would remain. Reasoning from appearances after death from palsy, would lead us to conclude that the disease almost always, in a greater or less degree, does remain. Instances may, no doubt, be adduced of perfect recovery from palsy; but I am persuaded that such are of very rare occurrence. If persons affected with hemiplegia do not become apoplectic in a short time, it often happens, that after a certain degree of melioration, the disease becomes stationary, or very gradually proceeds, even for several years, before it terminates fatally.” 130.

VI. Treatment. Our author enters first on the treatment of *hemiplegia*, the most common and the most important species of the disease. This species, as was before observed, being, in a great proportion of cases, the consequence of apoplexy, the means both of prevention and cure must be nearly the same in both:—indeed they differ chiefly in degree. We shall pass over the preventive measures which are judiciously stated by Dr. Cooke at pages 131-2-3 of the work. On the actual accession of the disease, the measures

must be nearly those employed in apoplectic seizures. Dr. Cullen was of opinion, that in hemiplegia of any standing there is probably either sanguineous or serous effusion. M. Serres almost always found a quantity of blood in cavities of the brain, produced by injuries done to that organ. Supposing then that pressure on the brain is the operating evil, the removal or diminution of that pressure is clearly our object;—and this can only be effectually attained by blood-letting, purgatives, emetics, diaphoretics, sialagogues, revelents, and discharges by means of blisters, issues, and setons. The ancients prescribed general and local blood-letting in this disease; and the moderns, who recommend the same measure in apoplexy, prescribe it in paralysis, but with caution. Those who doubt the propriety of bleeding in apoplexy, prescribe it wholly in palsy. Mr. Hunter was of opinion that in hemiplegia we ought to extract blood very largely, especially from the temporal arteries; and Dr. Abercrombie has published some cases illustrative of the success of this practice. The following are the sentiments of our author himself on this subject; and they are delivered with that cautious decision which marks the scientific practitioner.

“ My own experience on this subject is in favour of the practice of blood-letting in hemiplegia, when accompanied with strongly marked apoplectic predisposition; and I do not recollect to have observed any mischief produced by it under such circumstances. I once, indeed, saw this species of palsy terminate in a fatal apoplexy soon after a free evacuation of blood, in the case of a gentleman seventy years of age, of a plethoric constitution, and free mode of living; yet I am convinced that bleeding, all circumstances considered, was in this case highly proper; nay, it is not very improbable, I think, that by a still more copious evacuation of blood, the total abolition of sensation and motion might have been prevented. We have some cases on record, in which hæmorrhage from the nose, or from the hæmorrhoidal or menstrual vessels, have relieved persons affected by paralytic symptoms, especially when connected with the stoppage of the piles or the menses. With respect to the treatment of hemiplegia, as far as relates to the propriety of blood-letting, and the extent to which depletion by that means may be safely carried, it appears to me extremely difficult, if not impossible, with propriety to lay down any absolute general rules. Each individual case must be viewed in all its circumstances, and by a careful consideration of them, our practice should be regulated. Before we prescribe blood-letting in hemiplegia, we must investigate the age, strength, general constitution, and habits of the patient, and above all, the actual symptoms of the disease. In early, or even in somewhat advanced life, if plethora and the various symptoms formerly enumerated as tending to apoplexy were present, I should not scruple to bleed freely, both generally and topically. On the contrary.

in great age, debilitated leucophlegmatic habit, dropsical tendency, &c. I should think it right to abstain altogether from this, and from every other powerful mode of depletion, unless there was an evident great determination of blood to the head, marked by flushing in the countenance, throbbing of the arteries, redness of the eyes, &c. In doubtful cases, indeed, the safest plan would be to evacuate blood only topically by leeches or cupping-glasses, and to proceed as circumstances may direct, carefully watching from time to time the effects of the practice." 142.

There is much less caution necessary in the employment of purgatives in paralysis. "In all cases," says Dr. Cooke, "a free evacuation of the bowels is not only safe, but necessary." Boerhaave thought purgative medicines, in certain cases, of more service than all others put together, provided the body could bear their power. Van Swieten and Forestus are of nearly similar sentiments. Indeed all writers agree, as to the propriety of keeping the body open in hemiplegia; but that the cathartics should be suited to the nature of the case.

"The neutral salts and other purgatives called refrigerants, may be given where there is much determination of blood to the head, and in full habits; but in debilitated, leucophlegmatic, and dropsical cases, the more stimulating purgatives, such as aloes, calomel, scammony, colocynth, jalap, &c. may with more propriety be administered." 143.

Our continental brethren lay much stress on stimulating clysters; and emetics are prescribed with less scruple in palsy than in apoplexy by the practitioners of the present day—in France they are much employed. Dr. Cooke thinks, and we coincide with him, that in hemiplegia after apoplexy, especially at the beginning, and in plethoric habits, emetics are doubtful remedies; but not so purgatives. Of diaphoretics, diuretics, and sialagogues, our author's experience does not enable him to speak. Indeed they can be but of very subordinate efficacy. These observations are meant to apply, of course, to hemiplegia in its early state, and more especially in its connexion with apoplexy. But when the disease has subsisted for a length of time, and the apoplectic symptoms have disappeared—when determination of blood to the head is no longer apparent—then the *methodus medendi* becomes considerably modified, and a stimulant class of remedies may be safely ventured on, though previously inadmissible. The chief external stimulants are frictions, blisters, sinapisms, fomentations, balnea calida, electricity, and galvanism. The internal are volatile salts, acrid vegetables, aromatics, essential oils, and resinous substances. The ancients, Dr. Cooke remarks, were much too free in the em-

ployment of stimulants in palsy, from always viewing the disease as one of debility, coldness, and obstruction. Dr. Cullen made some useful distinctions in this respect. The excitement of the passions has been resorted to, in former times, as a stimulant in palsy; and some curious instances of their efficacy are on record. But, as Dr. Cooke has justly observed, these instruments are not sufficiently under our control and management, ever to become of much practical advantage.

Of the external stimulants, our author has derived most benefit from friction by the hand or flesh-brush, which may be rendered more efficacious by stimulating liniments, as the fossil acids and volatile alkalies, combined with oil or lard—essential oils, &c. Blisters and sinapisms are very generally employed in palsy—yet they should be used with caution, when sensa-tion and motion are nearly extinguished.

“Some practitioners are in the habit of applying blisters, or other stimulants to the head, immediately after the accession of hemiplegia; but I am of opinion, that we ought not to make such applications in plethoric constitutions, and especially when the disease is the consequence of apoplexy, till some blood has been taken away; and I think, that when such stimulants are used, they should be applied on that side of the head which is opposite to the paralytic side; because anatomists have ascertained, as above-mentioned, that in a very great proportion of instances, the cause of hemiplegia is seated in some part of the brain, opposite to the side affected.” 150.

The thermal waters, especially those of Bath and Buxton, have been greatly extolled, and doubtless they have deserved, like most other remedies, a modicum of the praise lavished on them. Sudden cold applications have also had their partizans. Dr. Cooke is inclined to think most favourably, upon the whole, of the warm applications, as most under our command. “If cold does not produce reaction; or if it give occasion to a very great reaction, it would probably do mischief.” Electricity has been very generally employed in hemiplegia, especially on the Continent, and they say with success:—nevertheless, it seems, of late years, to have fallen into disrepute. There are many histories on record, where it has been unequivocally injurious. It is no doubt a powerful excitant of the nervous system. But what becomes of the vascular system the while? Is not paralysis very generally—indeed, most commonly, the effect of pressure on the brain or spinal marrow: what success then are we to expect from electricity? We give our author’s sentiments in his own words.

“From my own observations of the effects of electricity in paralytic affections. I venture to recommend a trial of it under the cir-

cumstances, and with the cautions pointed out. I have in many cases seen it materially useful, and I do not recollect a single instance in which it appeared to do mischief. Although Dr. Cullen, as above mentioned, places more dependence upon a repetition of electricity, than upon its force, I wish to observe that, from experience, it appears to me to be chiefly serviceable on its first application, and that its beneficial effects are by no means proportioned to the length of time of the employment of it. Dr. Franklin observed, 'that the paralytic persons whom he electrified were generally restored for a few days in the beginning, but that they afterward either did not mend, or that they relapsed into their former state.'

I saw, some years ago, a case of complete paraplegia, in which the good effects of electricity were at first extraordinarily great, but they were not permanent; for though the application of this power was for a considerable time continued, the patient experienced a diminution, rather than an increase, of sensation and motion, in the parts affected." 159.

Mr. Partington, whose experience is considerable, and on whose judgment we certainly should be much inclined to rely, considers electricity as superior to galvanism, especially in its application to the head and neighbouring parts.

The actual cautery is said to have been successfully employed by the Egyptians in apoplexy, palsy, and epilepsy; and the moxa is much used on the Continent. Internally, the rhus toxicodendron, nux vomica, horse-radish root, and the seeds of mustard, have been often administered, with various success.

Half a grain of the toxicodendron (powdered leaf) may be given thrice a day; and the quantity gradually increased to two, three, or four grains, watching carefully the effects. It commonly produces a twitching or convulsive motion, or a sense of tingling or pricking in the paralytic part; and in these cases its efficacy is most conspicuous. Dr. Alderson, of Hull, has published several striking cases of the utility of this remedy in paralysis, which afford encouragement, if there be any faith in medicine, to a further trial of it in those cases where the employment of stimulants is not contra-indicated.

Of late years, the nux vomica, a medicine a good deal resembling the rhus toxicodendron in its effects on the constitution, has been much employed, especially on the Continent. Dr. Fonquier has been in the habit of giving it in the form of powder and extract, beginning with small doses, and gradually increasing them as far as fifty grains in a day.

"In a short time after it has been taken, spasmodic contractions of the muscles, he says, in a greater or less degree, or more or less general, are produced. Among the unpleasant effects of the nux vomica, especially in large doses, delirium, a sense of heat and oppression, and anxiety, may be mentioned. Sometimes general

tetanus, with loss of speech and the power of deglutition, accompanied with difficulty of respiration, pulsation of the heart, and dysuria, have been experienced ; whilst the good effects of this remedy are manifested by a gradual return of power in the paralytic parts." 168.

Dr. Dickson, of Clifton, has communicated the results of two cases, in which this able physician tried the *nux vomica* in hemiplegia with some advantage ; and Mr. Rose, of Swafham, has published two cases, in which the powerful, rather than the beneficial, effects were sufficiently conspicuous. In the eighth volume of the Medical Repository, Dr. Granville has communicated the result of Professor Dumeril's experience of this medicine in a case of palsy, where complete success was obtained. Many cases, on the Continent, have since occurred, where the *nux vomica* appears to have produced much benefit in this deplorable malady ; and we sincerely hope it may continue to support its character. *Cantharides*, administered internally, have been productive of some advantage in Dr. Cooke's hands ; but it must be given with caution.

In the treatment of paraplegia, where the cause appears to be in the spine, issues applied on each side of the vertebral column will, of course, be the principal measure to be depended on.

"In cases," says Dr. Cooke, "of paraplegia from diseased spine in scrofulous habits, I am of opinion that considerable advantage has in many cases been derived from a proper attention to air, exercise, diet, friction, sea-bathing, mercury in alterative doses, and certain tonic medicines, especially the bark." 184.

Dr. Baillie's remarks on this species of the disease have been fully given in our last number, page 301 *et seq.* to which we refer.

Of the partial palsies, *amaurosis* is the most important : for the treatment of which, we must refer to the volume itself, and to our review of Dr. Vetch's work in this, and Mr. Travers's volume in our next number. With the following, we must conclude our extracts from Dr. Cooke's publication.

"In those cases, in which the loss of motion of particular parts is accompanied with pain, Mr. Bell advises the application of leeches along the course of the nerves of the part affected, a free administration of cathartics, friction with laudanum, and proper supporting bandages. This plan, with the addition of opium and colchicum, internally taken in considerable doses, proved effectual in relieving the distressing case above mentioned under the care of Mr. Bell." 207.

Towards the end of the volume, Dr. Cooke takes notice of the *paralysis agitans*, or shaking palsy, described by Dr. Parkinson ; an exquisite specimen of which we saw a few

years ago at Gosport; the unhappy victim of which is still probably alive. Mr. Parkinson's treatment of this remarkable variety, consists in local detractions of blood from the upper part of the neck; after which, blisters are to be applied to the same part, and a purulent discharge maintained by means of savine cerate. If this fail, large issues are to be established on each side of the vertebral column, near the cervical region, and kept open, with proper attention to the state of the bowels.

If we have been successful in rendering such an account of Dr. Cooke's work to the public, as may enable them to judge for themselves respecting its nature, object, and execution, we have done all that we attempted, and all indeed that the public require. When the scales of Justice are thus placed in hands, "*quas nulla movent vota precesve*"—the opinions of critics are but—"as dust in the balance."

XVI.

Cases illustrative of the Treatment of Obstructions in the Urethra, &c. by the New Instrument, the Dilator; with further Directions, to facilitate its General Adoption: also, a Case of the Extraction of Stone from the Male Bladder without cutting it, by the Dilator; with an account of Improvements of the Method of Dissolving Stone by Injection, and of the common Operations of Lithotomy. By JAMES ARNOTT, Member of the Royal College of Surgeons in London. 1 vol. 8vo. pp. 119. London, 1821, with a plate.

IN one of the numbers of our *Quarterly Series*, we gave some account of Mr. Arnott's dilator; and we have heard favourable reports of it since that period, both in this country and on the Continent. In the present publication, our author delineates certain improvements in the instrument itself, gives minute directions for using it, and recommends an extension of its application.*

Our author remarks that the process of destroying stricture in the urethra, by means of caustic, is now totally relinquished, "from the experienced difficulty of confining its action to the stricture alone; and from the severe pain, irritation, and danger occasioned when this is not accomplished." *Dilatation* is, therefore, the remedial measure universally resorted to; but to the *action* of the instruments commonly in

* These instruments may be procured of Mr. Ironside, No. 7 Philpot-lane, Fenchurch-street.

use, Mr. Arnott objects, as being that of the wedge—"and thence they have four radical defects."

"The first of these which I shall notice, and which proceeds from the necessity of pushing forward the instrument when it is at, or in, the stricture, to dilate it, is, that the urethra is often pierced by it before or behind the stricture, causing hæmorrhage, false passage, and urinary abscess; or, which is productive of similar effects, the stricture is torn from its situation, and carried forward on the instrument. These misfortunes are particularly liable to occur when much force is employed to dilate, either for the purpose of opening a common stricture very quickly, or when a hard stricture will not yield at all to milder measures. The second defect is, that from this progressive motion being necessary to the dilatation, much needless pain and irritation are produced by the friction of the instrument upon the tender parts as it advances. A third great defect of these instruments, from their being unchangeable in dimension, is, that as the orifice of the urethra is of smaller diameter than the rest of the canal in its healthy condition, it cannot readily, or without much irritation, admit an instrument of sufficient size to dilate a stricture behind, to the level of the canal there; and as stricture not sufficiently dilated, commonly returns on intermitting the process of distention, a permanent cure is thus not obtained. The fourth defect is, that such an unchangeable instrument cannot act equally on the whole of a long stricture, or on several coexistent, at once." P. 3.

It appears to us that the above objections to bougies, &c. are by no means imaginary, whether the dilator be free from them or not. Mr. Arnott thinks it is free from them all: and for the following reasons.

"It consists of a strong, air-tight membranous tube, as of oiled silk lined with thin gut, about an inch and a half in length, which is introduced into the stricture in its empty or collapsed state, and is then filled to the necessary degree of pressure, with air or water, from a syringe without; and is again emptied before being withdrawn. The dilator, while opening the stricture, remains precisely in the same position within it; so that however strongly its action may be required or exerted, even when an old stricture is completely opened by it at one application, it cannot possibly, like bougies, either pierce the urethra, or tear it. As it is introduced in its shrunk or collapsed state, no painful or injurious friction is then occasioned. And, from its being changeable in dimensions, it will enter an urethra with the narrowest orifice, and still dilate a contraction in any part, to the natural size, or beyond that, if necessary, without stretching, like the bougie, the whole canal anterior to it. For the same reason the dilator acts equally on the whole of a long stricture, or on several strictures at once." 4.

Mr. Arnott next enters into a particular examination of the advantages and disadvantages above enumerated; for the details of which we must refer to the volume itself. But



the author having kindly lent us the plate to work off impressions enough for this number of the *Journal*, we shall here give a slight explanation of the figures, which may possibly enable those of our brethren in foreign countries and the colonies, who have no means of procuring the work or the instruments, to construct them themselves.

"Fig. 1 represents, in its distended state, a common urethra dilator of size No. 14. The part which acts upon the stricture is the short tube of strong silk, A, when distended. This is lined with thin gut, to make it air-tight, and covered with the same, or with varnish, to make it smooth for passing down. One end of it is tied upon the extremity of the directing wire C, and the other upon the extremity of the tube, or cannula, B. The wire C, which runs through, and projects beyond the cannula B, serves to conduct the dilating tube in its collapsed state into the stricture, and by the cannula, the distending fluid, air or water, is injected from the syringe D. The stopcock E, screwed into the outer end of the cannula, at F, retains this injected fluid.

"Fig. 2 represents the skeleton of part of the dilator, without the distensible tube, that its construction may be better understood.

"The cannula B may be of the common elastic catheter tube, or of tin, which is flexible, or of silver. To its outer end at F, is fixed, by cement, a small connecting piece of brass, to receive the corresponding screw end of the stopcock E, or of the syringe D, when only momentary distention is made, and the cock therefore is not required. At its other end (fig. 2,) it is represented as roughened, that the silk and gut tube may be more securely attached to it.

"The wire C, (which is represented by the dotted line in fig. 1.) is of silver, prepared so as to be elastic, as small as the necessary degree of strength will permit, and sufficiently long to project from both ends of the cannula; from the inner end, as much as the length of the distensible tube is required to be, and about one-fourth of an inch at the outer end, where it has a knob on it, or hook, to prevent the possibility of its slipping from the tube, and being left in the urethra. At its point (fig. 2,) there are two knobs or risings, between which the silk is tied on; one constitutes the point of the finished instrument, and is one-tenth of an inch in thickness, that it may pass easily; the other, a quarter of an inch distant from it, is merely large enough to prevent the tying from slipping back upon the wire. The wire is freely moveable to and fro in the conducting tube, for several reasons, such as to facilitate the tying on of the silk, so as not to leave it twisted, and that the silk tube be neither too slack nor too tight on the wire. That the surgeon may be able, however, to direct the point of the wire to the opening of the stricture, the whole should receive the double or S curve, natural to the urethra, as is shown in the plate." 23.

The syringe D is a brass forcing syringe, $3\frac{1}{2}$ inches long, and half an inch in internal diameter.

“For ordinary cases of stricture, the distensible tube may be constructed of strong silk ribbon, with the edges sewed together, and having its seam turned inwards, lined and covered with thin gut. Such a tube will in every instance be found of sufficient strength to bear the requisite degree of pressure. The greatest pressure of the thumb upon the piston of such a syringe as has been described, will rarely rupture it, and this force is more than the hardest stricture can for a moment resist. When little bulk in the dilator is desirable, as in the very beginning of the treatment, the thinnest oiled silk, lined with a gut, will be preferable; but as this will often give way to great pressure, it is proper previously to ascertain how much it can resist, and to point this out by a mark or check on the piston rod of the syringe. Besides the loss of the distensible tube from such an occurrence, there is a chance of injury to the urethra from the lining gut then protruding forcibly through the breach in the silk. In some very narrow strictures I have even used at first, merely a bit of single or double gut without a covering of silk at all; but besides the want of strength, in such a tube, to bear any useful degree of pressure for hard strictures, it soon enlarges from the moisture, and is thus apt to distend the sound as well as the contracted parts of the canal. It is possible that some kinds of gut may be naturally, or by preparation, sufficiently strong to bear momentary useful pressure, yet this is not particularly desirable, for although such a tube might be simpler, it would not endure, by any means, so long as that of silk; and a silk tube dilator, of moderate diameter, when collapsed, is as small as the smallest point that can safely be introduced through a stricture. The dimensions of the silk tube will vary of course according to the circumstances of the case in which it is to be employed. If several strictures are to be dilated at the same time, and if they are situated in the curved part of the urethra, the distensible tube must be long, and corresponding to this curve; but on ordinary occasions, it should seldom exceed two inches in length, and then the curve is unnecessary. The regulation of the diameter of the dilator will be afterward noticed.

“The gut which I have preferred for these purposes, is that of the cat. When prepared, by stripping off the outer fleshy coat and inner villous one, it is exceedingly thin, and yet sufficiently strong. That the gut may be completely supported by the silk tube when distended, it must be at least of equal dimensions with it; and it is well to ensure this by choosing it of larger size. When the stricture will admit an instrument of considerable size, as in stricture of the rectum, in order to preserve the dilator long air-tight, the lining gut may be double. When the silk has a covering of gut, which, on several accounts, answers better than varnishing it, this outer gut must be pierced in several parts, in order that any of the fluid escaping from the inner gut may have free escape into the urethra, and not distend the covering beyond the silk.

“The only part of the preparation of the dilator requiring nicety of execution, is the attachment of the distensible tube to the conducting tube and wire, which must be at once very neat and very

secure. The silk tube and lining gut should be tied on together, the artist taking care that the wire be kept exactly in the axis of the tube, or that the wrinkles or folds at the extremity be equal all round. The tyings may be made conical by notching the extremity of the silk after two or three turns of the small strong waxed silk thread have been made round it, and by then continuing the thread completely over it. The tyings should then be smoothed by a coating of bougie wax, and if unvarnished silk has been used, the operation is completed by covering both the silk and the tyings with a bit of gut. The secure attachment of the distensible tube to the cannula and wire is a matter of great importance; for, should the silk become detached in the canal beyond the stricture, it might happen, that the combined action of the urethra and the flow of urine would not be able to expel it, until the stricture were fully dilated; it behooves, therefore, both the instrument-maker and the surgeon, to be careful that there exist no such hazard. The accident would prove great negligence.

"The gut must be wet during the preparation of the instrument, and at each time of using it, to prevent its cracking, or the escape of the air under the dry and shrivelled tyings. After use, the water must be as much extracted as possible, and then it should be inflated and put aside to dry. This prevents the rotting of the gut. When the distensible tube consists of unvarnished silk, lined and covered by gut, it is more easily both dried and moistened, than when varnished silk is used." 27.

After thus describing the instrument itself, our author comes next to the mode of application. One difficulty experienced by surgeons at first is, to know when the distensible tube is exactly in the stricture. Careful previous admeasurement will in general ascertain this, or a part of the outer extremity of the tube may be enlarged, in the form of a button, which in introduction will be stopped there, and show the stricture.

The distensible tube being within the stricture, the syringe is to be applied, and "continued gradual pressure is best made by injecting air, the elasticity of which continues the dilatation as the stricture gives way, and yields to any momentary violent spasm of the parts; and more is afterward injected, or part allowed to escape by the cock, according to the patient's sensations. If the dilatation is intended to be sudden and momentary, then the injection of water will, on several accounts, be preferable to air." 30.

Our author thinks that, in the greater number of strictures, *momentary and considerable* distention by the dilator is the best method of treatment, and gives less uneasiness to the patient than any other.

"The distention is exclusively confined to the hard, and often nearly insensible contraction, and the short stay of the instrument

in the canal, occasions no painful spasm or irritation from the ineffectual attempts of the urethra to expel the foreign body." 31.

Nevertheless he prefers, in general, to accomplish the distention by several applications, rather than by one. "Gradual continued dilatation is generally the best plan when the stricture is of the long species." In these cases, a variety of size in the dilator, though not absolutely necessary, is more advisable than using but one size throughout." In respect to repetition, it is best to allow the irritation arising from the preceding application to nearly subside, before the dilator is reapplied. Two or three days of interval will be the least that can be allowed. A dilator measuring, in its distended state, one-third of an inch in diameter, is, our author thinks, about the natural average of the urethra, "and if the stricture has been *quickly* distended to this extent, it will probably, in most cases, be permanently so distended." Its introduction may be gradually left off, or the patient may be instructed to use in its place a large bougie for the same period.

Here our author details eight cases of stricture of urethra, treated by the dilator, and one case of stricture of the rectum. For the particulars of the former class we must refer to the work, the principal features of the latter case we shall here insert. Mr. Arnott prefaces the case with some observations on the superiority of the dilator, in intestinal strictures, over the bougies in common use.

"The dilator, which is introduced within the stricture, and again extracted, in a soft, pliable, collapsed state, which can act equally on any length of obstruction, which may carry the dilatation to any extent without ever at the same time keeping the frequently irritable sphincter of the gut distended, is obviously far preferable to any other means that has been employed for the same purpose." 73.

In the following case the bougie could not be used, owing to the great irritation caused by its friction. A gentleman of delicate reduced habit had frequent desire to stool, at which times he voided, with pain and straining, a small quantity of *fæces*. of a worm-like form, and generally mixed with mucus. Distressing tenesmus followed each stool, and he was troubled with flatulence, nausea, and inappetency. About three years ago his surgeon detected a stricture about three inches up, which admitted a small bougie, but the operation of passing it was always so painful, and followed by so much irritation, that he was obliged to intermit it for weeks. The gut, to the feeling, appeared pretty regularly constricted, and no other stricture could be felt.

"I introduced a rectum dilator, measuring, when inflated, two-



thirds of an inch in diameter, and, comparatively, with the bougie he had formerly employed, it went very easily. I inflated it as much as the patient's feelings would allow of. After fifteen minutes, the air was allowed to escape, and the instrument was extracted." 75.

On the third visit Mr. A. introduced the dilator, but could not keep it in so long as before, in consequence of the urgent desire to stool. A watery solution of opium was thrown up the rectum. After this the dilatation went on but slowly till the ninth day, when it was retained nearly half an hour. In six weeks the contraction was removed—the bowels had greatly recovered their natural functions, and Mr. Arnott left off attendance.

STONE IN THE BLADDER.

At page 79 of the work before us, Mr. Arnott enters into a short criticism on the present methods of operating in lithotomy—gives some account of new securities against several of the dangers attending these operations—and describes a new method of injecting for the solution of stone, together with a case of stone extracted by means of the dilator.

We shall pass over our author's observations on the internal use of lithontriptics, since little is now expected from such medicines, excepting as correctives of the calculous diathesis.

The idea of dissolving stones in the bladder, by means of solvent menstrua injected into that receptacle was eagerly seized by chymists, and many of Fourcroy's experiments show that small uric acid calculi may be softened and dissolved, in a few days, by immersion in watery solutions of alkalis so mild as to be swallowed ;—while calculi composed of the earthy phosphates may be still more quickly dissolved by the nitric and muriatic acids diluted so as to be no sourer than lemonade, and hardly more acrid than the urine itself. Dr. Marcet mentions the case of a person in St. Thomas's hospital, where a lithontriptic injection, consisting of 23 drops of muriatic acid to four ounces of water, was repeatedly used, and retained for upwards of an hour, without producing the least inconvenience. " This is a quantity of acid, says Mr. Arnott, double of that which, in conducting some experiments on this subject, I found very rapidly to dissolve an earthy calculus immersed in it." Mr. Arnott thinks that, under all circumstances, it seems extraordinary that the practice of injections should have been totally relinquished. The reasons, he imagines, may be sought, first, in the exceedingly imperfect method of injecting the bladder, hitherto practised—and secondly, the difficulty of ascertaining the kind of calculus in the bladder. The latter difficulty might be got over, if the smallest particle of the stone could be procured—and he thinks it might be procured in the following manner :—

“ When the stone comes to the orifice of the bladder, let an open-pointed catheter (having of course a ball-ended wire filling it during the introduction) be passed till it touch it, and by this a small circular saw, like that of the trephine, may then be introduced to grate off from the calculus, by a few turns, a sufficient quantity of dust for examination.” 85.

The method of injecting hitherto has been to throw a large quantity, at once, of the solvent into the bladder, there to remain as long as the bladder will bear it, repeating the process according to the sensibility of the parts. The great defect here is, that the solvent cannot remain in contact with the stone, in a state of purity, owing to the constant descent of urine from the kidneys, which dilutes it, or possibly renders it inert. To obviate this defect, Dr. Neil Arnott contrived an apparatus called the double catheter.

“ The double catheter may be made of metal, or of elastic gum. When of metal, it is formed by running a partition along a common catheter, so as to divide it into two channels, which open near its point, by distinct holes of the usual size. By one of these channels liquid may be passing into the bladder while it is again escaping, mixed with the urine, by the other. When of elastic gum, it is formed by inserting a small catheter into a larger one, and using the first for the injection of a fluid, while the latter allows it again to run off. In either construction separate flexible tubes must be attached to the outer extremities of the divisions or catheters, as prolongations of these; one, to connect the catheter with the reservoir from which the fluid is to enter by it, the other to carry off the waste fluid and urine to a fit receptacle. This apparatus has other obvious applications in affections of the bladder, besides that of dissolving stone. It is well adapted to relieve irritable bladder, in a great variety of cases in which it occurs, by allowing the acrid urine to run off immediately on descending from the kidneys, while any bland or medicated liquid may be kept circulating in the apparatus, and occupying the bladder in the desirable quantity instead of the urine. Again, it enables us to dilate a contracted bladder; a fluid column of any height may be made to act upon the bladder for this purpose, by varying the altitude, in relation to the patient, of the reservoir and extremity of the waste pipe.” 88.

The double catheter will enable us, our author thinks, to place the stone in an uninterrupted stream of its proper solvent, which, however weak it may be, will still have an effect, and there will then be no temptation to risk irritating the bladder by a solvent too strong.

Mr. Arnott has relieved irritable bladders by letting the circulation of warm water go on through the double catheter, during the sleep of the patient. With this instrument there need never be more than a few drachms of fluid in the bladder, so that the stimulus of distention will never occur.



We shall pass over a proposal which our author has made to introduce an apparatus into the bladder and round the stone, so as to admit of strong solvents being injected round the calculus. We fear the apparatus is too complicated ever to answer the purpose; at all events, we refer to the work itself for the particulars.

At page 96 Mr. Arnott commences his observations on the operation of lithotomy.

"The chief circumstances upon which the fatal terminations of lithotomy depend, are the following:—

First, Exhaustion of the powers of life from the pain of the operation.

Second, Profuse hæmorrhage.

Third, Violent inflammation.

Fourth, Protracted irritation, from an unhealthy state of the wound." 97.

The first is comparatively rare. The third circumstance, violent inflammation, is by some considered to be by far the most common occasion of death, whether arising from the violence done to the parts necessarily divided—the action of the urine on the new surface—or its insinuation and lodgement among the adjoining parts. Before stating Mr. Arnott's means of obviating these dangers, we shall introduce here some observations made on this subject, in the ninth number of the "*Quarterly Journal of Foreign Medicine*," which appear by some notes, letters, and expressions, to be obviously from the pen of Mr. Shaw, demonstrator and lecturer on anatomy in the school of Windmill-street.

The writer states that he assisted a gentleman in the country to perform lithotomy on a hale, stout man, 50 years of age. There was very little hæmorrhage during the operation, but towards the evening a slight bleeding took place. In the evening visit, the operator was persuaded by a surgeon present to put a compress on the wound, which was fastened by a T band age. "In the morning the scrotum was found puffed up. In three days it was gangrenous, and the patient died, as one with effusion of urine in consequence of rupture of the urethra." The reviewer observes that the cause of this effusion is too apparent to require comment.

The next case brought forward, is that, we believe, of the late eminent actor, Mr. Rae, of one of the London Theatres.

As his case excited considerable sensation, we shall be a little particular in stating it. The patient's sufferings, prior to the operation, were excessive, and he bore the operation itself with the greatest fortitude. There was some difficulty in introducing the staff, in consequence of a stricture, "but the cutting part of the operation was done with great rapi-

dity," by, we believe, Mr. Charles Bell. "There was very little injury done to the sides of the wound in the extraction of the stone, as it was so sandy a calculus that it was brought away in very small pieces."

"The only tedious part of the operation was syringing the bladder; and he was put to bed less exhausted by the operation than any patient we ever remember to have seen. There was very little blood lost during the operation. He begged to be allowed to lie upon his side; this was granted for a short time, as he expressed himself much relieved of pain by lying in that position. The operation was performed at half past three: on coming to him about nine in the evening, we found him exceedingly well and cheerful, suffering very little pain. On looking at the wound, we were rather surprised to see no marks of blood or urine on the clothes; and we were, moreover, informed by the nurse and pupil in attendance, that no urine had passed; the patient had been lying on his back for the last three hours, having only lain a very short time on his side. Suspecting that some clot of blood might be the cause of stopping the wound, we passed the finger in, and were much astonished to find that it required considerable boring to introduce the finger into a wound, which six hours before admitted a large pair of forceps, enclosing a portion of stone, to pass. The fore-finger was passed as far as the knuckle: a small quantity of blood and urine followed. It was not deemed necessary to do more, as he was not suffering, nor had he any desire to make water; and we reasonably enough imagined that, in consequence of the irritation of the kidney, produced by the operation, that little urine had been secreted. He was then given in charge to the nurse, with an urgent request that he should lie on his back." *Journ. of Foreign Med. No. IX. p. 50.*

Towards midnight, the patient suffered great pain in the bladder, but was relieved about six in the morning, by passing a pint of bloody water by the urethra. Throughout the three succeeding days he went on remarkably well, the urine passing freely by the wound, the patient only complaining of slight pain quite on the pubes, which was attributed to the stretching of the penis on the staff during the operation, to prevent the escape of the urine. He continued very well on the fourth day, but on the fifth he was attacked with purging and a very indistinct kind of pain in the lower region of the abdomen. The purging continued—he lost his spirits—and, though suffering no particular pain, he expressed a conviction that he should die. He died on the 13th day after the operation.

"The cause of his death was fully explained on dissection. There was a large abscess, containing portions of gangrened cellular membrane, between the pubes and peritoneum; this abscess being exactly similar to that produced by effusion of urine in other circumstances." 51.

The reviewer asks what could be the cause of this? and then endeavours to explain it thus :—

“ The operation, according to the received notions, was very well performed. The stone was extracted quickly, and without any laceration of the parts, or any serious bleeding : but what followed ? The wound was so little bruised by the extraction of the stone, that the healthy tumefaction of the injured parts became so great, that the whole extent of the wound was actually closed. In consequence of this, it required very considerable force to pass in the fore-finger : this may appear to be a thing almost incredible, but we most solemnly avow that it was so. After seeing this, it is not easy to explain what took place ? In the first case related, the obstruction was on the surface of the wound, and the urine was consequently driven into the cellular membrane, below the skin, into the scrotum ; but here the obstruction was deeper, and the urine, while it was forcibly driven into the urethra (for it came with great violence,) escaped by the cut in the side of the urethra into the cellular membrane, between the bladder and pubes, and lodging there, was the cause of the abscess.” 51.

A friend of the writer's stated to him that he had been present at an operation of lithotomy. Eight hours afterward he was sent for by the friend of the patient, and found the latter suffering excessive pain in the bladder. Finding the external wound very much contracted, he forced a catheter through it into the bladder, and thus relieved the patient by drawing off a quantity of urine. There can be little doubt, the reviewer adds, that the same consequences would have followed in this case as in the last, had not the bladder been relieved.

“ If to these cases, we add the well-known fact, that for the first twenty-four hours after the operation, the urine generally flows by the urethra, we shall probably come to form a correct judgment of the reason why patients die so often of effusion of urine, and knowing this, be led to the proper means of preventing it. The most obvious cause of this obstruction to the passage of the urine during the first twenty-hours, is the great swelling that takes place in the tract of the wound, and it must be evident that the less violence there is done to the parts in extracting the stone, the more healthy tumefaction will there be.” 52.

We confess that we cannot see so clearly how a clean cut, and no contusion of the parts by the dragging of a stone through them, *increase* the subsequent tumefaction. We should think it was just the reverse. Are not the swelling and tension of a gunshot wound increased (*ceteris paribus*) by the efforts to drag the ball out again ? And is not this a fair analogy ? Speaking of the means of preventing these accidents, the reviewer asks, if it be not allowable to permit

the lower extremities of the patient to lie apart, instead of being closed, as they always are, and thus in some degree, prevent the chance of effusion, either of blood or urine? If the closing of the thighs be meant to restrain hæmorrhage, he thinks that no dangerous bleeding can be thus suppressed—and an oozing should not be checked from passing outwards. Some of the older surgeons put tents into the wound; but being on an erroneous principle, the *practice*, though good, was given up when the principle was found defective. The reviewer therefore suggests the propriety of reviving the old practice, and of leaving a canula of elastic gum in the wound for the first 24 hours.

“But we must be still more astonished that the necessity of introducing a canula has not been more enforced, when we see how clear Sharp is in his observations. ‘The first good symptoms after the operation, is the urine coming freely away, as we then know the lips of the bladder and the prostate are not much inflamed, for they often grow turgid, and shut up the orifice in such a manner, as not only to prevent the issue of the water, but even the introduction of the finger, or female catheter, so that sometimes we are forced to pass a catheter by the penis.’”* p. 113.

“We may now be allowed to submit, that effusion of urine is generally owing to the following causes:—

“1st. That the parts at the neck of the bladder are not cut *clean*, that they are lacerated, and the cells of the cellular membrane consequently more opened.

“2d. That in trying to push in the gorget, or from the bad management in the introduction of the forceps, a cavity is made in the cellular membrane anterior to the bladder, and thus a sac is formed for the lodgment of the urine.

* “We are exceedingly happy to have it in our power to give the following example of the good effects of the introduction of the canula:—

“December 8, 1820.—Henry Coleman, aged twenty-two, was cut for the stone, in the Middlesex Hospital, by Mr. Cartwright. The operation was very dexterously done, and the stone was extracted in less than three minutes after the introduction of the staff. The patient was cut at half past twelve. At six in the evening no water had come away; a canula was then passed into the bladder. In doing this, Mr. Cartwright found the opening at the neck of the bladder very much contracted. On the canula reaching the bladder, a quantity of bloody water spirted through it, to the distance of four feet! The instrument was left in the bladder; the patient did not suffer the slightest inconvenience from it. The urine did not flow by the side of the tube, but came dribbling through it. On the succeeding day the wound appeared completely closed round the canula. On the third day the tube was removed, and *now* the opening appeared to be *larger* than on the preceding day, and the urine now dribbled freely through the wound; on the fifth and sixth day some urine passed by the penis.

“Excepting a slight pain in the bowels, combined with headach.

"3d. That the first incision is made too high ; that there is not a depending opening for the urine to pass.

"4th. That although every incision may be correctly made, still the passage of the urine may be obstructed by the swelling of the sides of the wound." 54.

But to return to Mr. Arnott. This gentleman, alluding to the dangerous consequences of extravasation of urine, after the lateral operation of lithotomy, proposes a syphon catheter to be kept in the urethra, which, he says, will carry off every drop of urine by the natural outlet, as soon as it descends from the kidney—"and instead of leaving a tendency in the urine to spread in the wound and adjoining parts, the action of the instrument may be made so strong as even to draw any secretion from the wound that may take place in it."

"The *syphon catheter* requires to be longer than a common catheter, and instead of one opening in the point, which is the construction of the common elastic catheter, it should have several, to diminish the chance of obstruction from the bladder touching it; and an inch of its external extremity must be turned sharply up, that it may always remain full of urine, for, should the air get into it, instead of liquid, it ceases to be a syphon, and acts only as a common catheter.* It might also be a useful precaution, to tie a bit of gut upon the outer extremity of the syphon, which would constitute a valve, allowing the escape of the urine, but by its collapse preventing the access of air. The syphon catheter must be filled with water before it is introduced, or immediately after; and it may be made to act with any desired force in removing the urine, by raising or lowering the external extremity." 103.

In speaking of the high operation, which some surgeons are endeavouring to introduce into British surgery, Mr. Arnott suggests that "a staff or strong catheter of the common form, may be made to contain, in its curved part, a sliding piece, that may be pushed out after its introduction, like the joint of a telescope; the curve would thus be lengthened to nearly a semi-circle, and of course the point might easily be felt above the pubis."—Our author conceives that, with some

on the third day after the operation (but which was completely removed by a purge, though leeches were applied as a preventive of inflammation,) this patient has not suffered the slightest pain since the introduction of the canula, up to this, the ninth day. Some of the urine still passes by the wound, although a very large quantity passes by the penis. The whole progress of this case entitles us to say, that it may be considered as one of the most successful on record.

"We are happy to see that our opinions are strengthened by the authority of Dr. Physic, who has shown so much ingenuity in many points of surgery. He says, that of late he has been in the constant habit of introducing a piece of canula into the wound, and since he began this practice his success has been much increased."

* Fig. 6, in the Plate.

improvement in the instruments, the high operation is likely to become the preferable one in practice.

The case of extraction of a calculus by means of the dilator, is an amplification of that mentioned in our review of Mr. Arnott's work on Stricture, in the Quarterly Series of this Journal.

We have given some account of the construction of the dilator for the use of our distant brethren; we have now only to add a few short explanations of the remaining figures in the plate given in this number of the Journal.

"Fig. iii. is one of the Dilators used in the case detailed at p. 114, in which the Stone, *fig. iv.* was extracted from the bladder, without cutting the prostate gland.

"*a, a, a, a,* is a cannula, by which the urine may run off.—*d, d, d,* the distensible tube of silk, lined with gut, surrounding the former.—*b, b, b,* the small cannula, through which the distensible tube is inflated from the bag, *f*; *e,* being a stopcock to retain the air after injection, and *c, c,* a bit of flexible tube connecting the cock to the air tube, so that touching the cock by the syringe or bag may not jar the Dilator in the tender passage. A valve might be substituted for the cock with advantage. As it is important that this Dilator should be perfectly air tight, to prevent the necessity of withdrawing it for any other purpose than the substitution of a larger as the dilatation goes on, the silk tube should be lined with double gut.

"Fig. v. is the Double Catheter, for injecting the bladder in cases of irritation of it or contraction, and for the solution of stone: it is exhibited on a reduced scale.—See the general description of it, p. 87.

"*f,* is the reservoir of the liquid to be injected; *d,* the flexible tube, commencing at the stop-cock *e,* by which the liquid is conveyed to the inner catheter *a,* which then carries it into the bladder, opening at *a*; *b, b, b,* is the outer catheter, by which the fluid returns with the urine, and is directed to a proper receptacle by the flexible tube *c,* of any desired length. It is important to have the outer catheter of considerable diameter, to diminish the chance of its being obstructed by the tenacious mucus, so commonly secreted in disease of the bladder.

"Fig. vi. the Syphon Catheter, for drawing off the urine constantly and completely after the operations of Lithotomy and puncturing, or any wound of the bladder, so as to prevent the urine escaping by the wound. See the description, p. 102.

"Fig. vii. is to give the idea of something made to protrude from the end of a catheter or tube, after its introduction into the bladder, which will act as a button to prevent the tube slipping out, see p. 103. A variety of contrivances are applicable to this purpose." iv.

We entertain strong hopes that the ingenuity displayed by Mr. Arnott in the construction and employment of the dilator, together with his general information, and professional ability, will prove equally serviceable to his brethren, and creditable to himself.



1821.]

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XVII.

Supplemental Review,

AND

QUARTERLY PERISCOPE

OF

PRACTICAL MEDICINE, SURGERY, &c. &c.

WITH COMMENTARIES.

Paucis libris immorari et innutriri oportet, si velis aliquid trahere, quod in animo fideliter hæreat. SENECA.

Duo vitia vitanda sunt in cognitionis et scientiæ studio. ***** Alterum est vitium, quod quidam nimis magnam operam conferunt in res obscuras atque difficiles, easdemque non necessarias. CICERO.

WHEN we cast our eyes around the horizon of medical science and literature, the effusions of thought, observation, and experiment, appear, like the stars in the firmament, or the sand on the shore, without number or end. We find ourselves bewildered with the multiplicity of objects, and are at a loss where to begin, or how to proceed. Could the Father of Physic rise from the tomb to view the products of the toiling press—the endless records of the past—the ever-varying opinions of the present—the vague conjectures respecting the future ;—what would be his surprise ! He would probably exclaim, in nearly the same language which he held more than two thousand years ago. Alas, my children, it is still the same—“*Ars longa et lata—vita brevis et incerta—judicium difficile, et experientia fallax.*” Seeing then that the limits of our faculties, our time, and even of our paper will not permit us to grasp at much, without running the risk of securing nothing, we shall imitate the humble and industrious BEE—winging our flight of freedom over the flowery fields of literature and science—admiring their beauties, but culling only their sweets.

1. *Aneurisms.** Mr. Pattison is a countryman of our own, a man of ability, brought up in the Glasgow school, and now exercising his talents, like many other of his compatriots, on a foreign soil—if that soil can be called *foreign*, in which the language, the

* Cases of Aneurism, with Observations. By Granville Sharp Pattison, Esq. Surgeon of Philadelphia. *Amer. Med. Recorder*, April, 1820.

feeling, the *heart itself* is English, whatever may be said to the contrary by cis-atlantic or trans-atlantic politicians. We have been much gratified by the perusal of these cases and observations of Mr. Pattison, and shall endeavour to present a concentrated analysis of them to the British reader.

We are sorry to be obliged to differ with Mr. Pattison, at the very outset—but it is only on a matter of opinion. He thinks *Medical Journals* should be records, not of simple, but of *remarkable* experience. Without advocating the practice of filling up journals with common, *uninteresting* matters, we think that the proportion between the common and the extraordinary, in *journals*, should be pretty much the same as in actual occurrences in practice. This, however, is no longer a matter of our concern—we have no reason to complain when the selection is at our own option. In the following sentence of Mr. P.'s we fully coincide.

“Periodical medical publications are eminently useful. Their expense is moderate, and, if properly conducted, they convey, in a limited compass, not only that which is remarkable in the experience and practice of physicians of one country, but of the world.” 194.

We can believe the above, although we have reason to know that its author is just entering on *editorial* functions himself, and consequently is liable to be a little more in love with medical journals than other folks. But to business.

The first case brought forward by Mr. Pattison, is that of a gentleman (Mr. J. M'C.) who died in the 47th year of his age. He was a man of talents and remarkable activity, enjoying excellent health until within six months of his dissolution. In the autumn of 1816, he suffered from what was considered *rheumatic* pains in the lower part of the neck, which did not give way, in the least, to local or general remedies. Attentive examinations of the neck could detect nothing amiss there. The anti-rheumatic plan was therefore persevered in till the patient's death. The gentleman did not desist from business during this period. One evening in April, 1817, he retired to bed in his usual state of health, but was found apoplectic in the morning. In the evening he recovered his sensibility—conversed rationally with his friends for an hour and a half—then relapsed into coma, and expired the next morning.

Dissection. In the head, the cerebral veins were much distended, yet no sanguineous or serous effusion was any where discoverable, although the brain was dissected with the utmost care.

But it was in the chest that the nature of the original disease was at once exposed. A large tumour rose from above the arch of the aorta, projecting sternally, and firmly adherent to the spinal aspect of the sternum.

“Upon separating this connexion, we discovered that the tumour was formed by an aneurism of the *arteria innominata*, and that the sternum, where pressed on, had become carious. The transverse vein



formed by the union of the left subclavian and jugular veins, presented a very uncommon appearance. It had more the character of a ligamentous cord than of a distended vessel; and when opened, it was found filled with coagulable lymph, which completely obliterated its cavity. Being curious to ascertain the cause of this, I traced it carefully downwards towards the right auricle. Upon arriving at the sternal aspect of the aneurismal tumour, the vein terminated that portion of it which crossed the tumour, having from pressure become obliterated. The tumour measured four inches in its transverse diameter, and three in its longitudinal. The depth of the sac from its spinal to its sternal surface was two inches and three quarters. From its situation it completely covered and concealed the trachea and gullet. The whole length of the arteria innominata was involved in it, and those arteries, into which that vessel naturally divides, arose separately, as independent branches from the spinal aspect of the aneurismal sac. Both the superior and inferior thyroidean veins were enlarged and distended with blood; they appeared to be the channels through which the venous blood from the left superior extremity and left side of the head and neck was conveyed to the pulmonary auricle." 196:

We cannot entirely agree with Mr. Pattison that "it is a very rare occurrence for aneurisms of the arch of the aorta to remain unsuspected." These aneurisms are often suspected to exist, when they do not exist; and are not very unfrequently going forward without giving positive indications of their presence. The case of the late Dr. Primrose Blair, related at page 133 of the second volume of the last series, will exemplify this remark, and we could adduce many others bearing on the same point. We agree with our author that it is very remarkable that the pressure of the aneurismal tumour on the trachea and œsophagus, which must have been considerable, as it obliterated the transverse vein, and rendered the sternum carious, caused no symptom indicative of such event during life. The tracheal margin of the tumour projected above the first bone of the sternum, yet the physicians in attendance could not perceive any pulsation in it. Our author thinks, however, that pulsation must have existed. We cannot coincide in opinion with Mr. Pattison, "that the apoplexy which terminated Mr. M'C.'s life was caused from the obliteration of the transverse vein." We know that aneurismal affections of the heart and great vessels have a remarkable tendency to induce apoplexy, where no obliteration of veins takes place.

Mr. Pattison properly observes, that "whenever local affections are obstinate, we cannot be too particular in examining both local and general symptoms, before we allow ourselves to be satisfied as to the nature of the ailment." We know that pains are often referred to rheumatism, when they are symptomatic of much more serious affections, at a distance from their external seat.

Case II. This was a man who had served with the Duke of Wellington through the whole peninsular campaigns, and, of course,

had not led a life of ease and idleness—he was, on the contrary, much exposed to dangers and fatigue. Towards the close of the war his health began to fail. The first symptoms of his complaint were pain in both shoulders, particularly in the right. This led the hospital surgeon to treat it as a liver affection, and exhibit mercury, which, of course, did no good. He was therefore discharged the service as an invalid, and returned to his native place, John's-town, in Scotland, and pursued, though in bad health, his original trade, that of weaving.

In the spring of 1818, the pain of the right shoulder almost disappeared, while that in the left became much aggravated, and changed in character—it moved down under the scapula, and became of a throbbing nature. Towards the end of May, a pulsating tumour, the size of a hen's egg, was discovered projecting from under the inferior angle of the scapula. It increased rapidly, and in July it was equal in size to the head of a new-born child, the scapula being tilted forward by it, and the motion of the left upper extremity much impaired. The pain in the situation of the tumour was constant, deep-seated, and severe. The breathing was difficult, and attended with a short disagreeable cough. By the month of November, when our author first saw the case, the tumour had acquired an immense size, and its pulsations were very violent. Emaciation had advanced—the dyspnœa was great, and the patient could only articulate in a low whisper. The pulse was from 80 to 90 at both wrists, and feeble; the radial pulsation not synchronous with the cardiac ones. A consultation was held in Glasgow, where fourteen of the elect of the profession in that city, including Professor Thomson of Edinburgh, examined the case, but they were far from unanimous in their opinions. Of the fourteen gentlemen, twelve thought it either a subclavian or axillary aneurism. Dr. Thomson and Mr. Pattison considered it aortic. Professor ***** ridiculed this idea in the strongest terms possible, and gave a most decided opinion of its being of a different nature.* The patient sunk in six weeks after this consultation.

Autopsia. On laying open the chest, the tumour was seen arising from the arch of the aorta, just as it describes the curve, and immediately below where it gives off the left subclavian artery, passing backwards, covering, and completely concealing the bodies of the 2d, 3d, 4th, 5th, 6th, and 7th dorsal vertebræ.

“Upon the right it passed under the pulmonary artery, and reached to within two inches of the inner surfaces of the ribs of that side.

* We should not have quoted this passage, were it not to caution and exhort our brethren against the illiberality as well as impolicy of ridiculing each others' opinions in matters of this nature, where we are all so liable to error, and all stand in need of lenity rather than ridicule, in the arduous discharge of professional duties. We have suppressed the name of the individual, because our object is not to hurt the feelings of any one.
Rev.

On the left the lung was nearly absorbed from its enlargement ; that side of the chest being almost filled by the aneurismal tumour. The small flattened portion of the lung which remained betwixt the sternal aspect of the tumour and the ribs adhered firmly to it. When this adhesion was destroyed, we remarked that that portion of the sac from which it had been separated, was formed by the pleura separated from the ribs and thickened. It was opened at this point, and we were enabled by doing so, to expose the dreadful ravages which the disease had committed. The bodies of all those vertebræ pressed on by the aneurism, had become carious, and several of them had been almost completely destroyed. The opening by which the tumour was allowed to protrude through, was formed by the destruction of nearly the whole of the bodies of the 3d, 4th, 5th, 6th, 7th, 8th, 9th, and 10th ribs ; a few of the portions of these bones carious were left projecting partially across the passage which communicated betwixt the thoracic and external divisions of the sac. Of the remains of the rest, part had been absorbed, and the remainder were found mixed with the coagula which filled the cavity of the sac. The walls of the cyst towards the thorax were formed by the pleura separated from its natural connexions. Externally, its parietes were composed of condensed cellular substances, strengthened by an internal coating of firm coagulable lymph, which was about half an inch in thickness. Judging from the appearance of the coagulated blood which filled the sac, it seemed to have been nearly all in a fluid state until the death of the patient. When taken out and weighed, it exceeded ten pounds in weight. The external tumour measured on its surface 18 inches in its longitudinal diameter, 14 in its transverse, and 20 in its oblique.* 201.

This examination afforded a satisfactory explanation of the symptoms. The pains felt in the right and left shoulders depended, in all probability, on the pressure made on the phrenic nerves. So soon as the circulation made an opening through the parietes of the thorax, the pressure was, in a great measure, taken off the right side. The encroachment of the tumour on the trachea and lungs explains, of course, the dyspnœa from which the unfortunate patient suffered so much. Upon the whole, these two cases are deserving of record among our stock of pathological facts, in order to assist our diagnosis in difficult and anomalous cases.

2. *Erysipelas of the Face, and Inflammation of the Brain.** There are few affections more alarming than erysipelatous inflammation of the face extending to the envelopes of the brain. There is something mysterious about erysipelas, and the practice is still undecided and vacillating. Dr. Dickson, of Clifton, whose professional dis-

* Dr. Dickson, Ed. Journal, No. 66.

crimination is well known, has detailed an instructive case in the last No. of a respected cotemporary Journal, where decisive measures appear to have had a very felicitous result.

The patient, a stout boy of six years, fell into the water, through broken ice, in January, 1820, and four or five days afterward complained of alternate flushes and chills, with pain in the right side of the face, which became red and slightly swelled. Some days of feverishness succeeded, with increase of tumefaction, drowsiness by day, and slight delirium at night. Six days from the commencement of the attack, he was brought to Dr. Dickson, much worse. Six ounces of blood from the arm—a cathartic—febrifuge mixture. On the 8th day he was comatose in the morning, but quite phrenetic in the course of the day. He was bled again to eight ounces, and five leeches to the temples—powders of jalap and calomel. The venesection was ordered to be repeated in the evening, but was neglected. On the tenth day all the symptoms were unrelieved;—rather increased. Blood was decisively drawn until he became faint and quiet, and the proper impression was made on the disease. Nothing more was necessary than keeping up brisk intestinal action by the aid of calomel and other cathartics.

This case, which does credit to the decision of the narrator, shows that when the brain, or other vital organ is inflamed, all other considerations should give place to the indication of checking that process, *coute qui coute*. Nothing but blood-letting, carried the length of arresting the phenomena characteristic of the inflammatory action, can offer any security in such cases.

3. *Disease of the Heart.** We shall introduce this case nearly in the words of the author, omitting only some unnecessary passages.

“W. B. aged eight years, about the 1st of January, 1817, began to complain of indisposition, of restless nights, with some symptoms of nervous affection, and palpitation of the heart.—His indisposition gradually increased, attended with headach and pain through the lower part of the chest. About the 1st of February he was attacked with slight fever, some nausea and distress in the stomach, and increased headach, for which an emetic and some cathartic medicines were administered by the family, and some relief obtained; but the irregular *febrile* affection and indisposition continued, attended with the palpitation of the heart, pain in the head, shoulders, and limbs—he had still kept about and enjoyed a tolerable good appetite. In the early part of March he was violently attacked with general excruciating pain, and high febrile symptoms—the parts mostly affected were the chest, the left shoulder, and the limbs; and in the progress of the disease, was attended with rising of blood, and that followed by expectoration of mucous and bloody matter—he

* Dr. Sherrill, New-York Repository, Jan. 1820.

lay about five weeks confined with this attack ; attended with such pain and distress in the chest and limbs, that he could not be moved without great difficulty—he gradually recovered after about five weeks, but was still affected with expectoration, erratic pains and palpitation.—At this stage of the disease, I saw him for the first time, in consultation with our venerable friend Dr. BARD— when, from the previous history of the complaint, together with the presence of emaciation, hurried respiration, and fluttering palpitation of the heart, turns of pain through the region of it also spells of disposition to syncope and nervous irritation, and the apparent enlargement of the *thorax*, we were induced to suggest that there was an organic affection of the heart, or some of its appendages. The prescription which we made was directed rather to palliating the symptoms, than to an expected recovery—he however gradually got better, walked and rode out occasionally ; the pain left him by times, and he was entirely relieved of the cough and expectoration. But through the whole progress of the complaint, he was often afflicted with those turns of difficult respiration, some nervous affection, increased palpitation, and great distress, and those spells were brought on or increased by fatigue or agitation of the mind. In the early part of May, he was taken to New-York, in hopes of improving his health, but returned in three weeks not at all amended ; he was now more frequently attacked with severe spasmodic affections across the regions of the heart, attended with nausea and vomiting. From this period to that of his death, which occurred on the 25th of September, the same symptoms were frequently renewed with more aggravation, especially with cedematous swellings, great pains, and a gangrene in his feet. He also became so emaciated, that he resembled a skeleton wrapped up in a delicate skin.

“ The cavities of the thorax and abdomen were laid open ; in the abdomen the liver was very much enlarged, and much harder than in a natural healthy state ; the left lobe extended itself over the stomach, and reached to the left side, the gall-bladder was very full of thin bile, the spleen was unusually hard, and of a darker hue than natural—the blood-vessels of the mesentery were considerably distended with blood, and showed traces of inflammation, the other viscera of the abdomen were in a natural state.

“ In the thorax, on separating the sternum from its attachments to the diaphragm, it was found to adhere firmly throughout to the lungs and anterior part of the pericardium ; those adhesions being dissected, so as to turn up the sternum and cartilaginous portions of the ribs, traces of inflammation and disease were evident in every part of the thorax. The lungs adhered to the pleura, to the mediastinum, to the diaphragm, and were firmly attached to the pericardium ; and the attachments were so firm, that the separation had to be made by actual dissection. The substance of the lungs exhibited strong marks of disease and previous inflammation, but were not ulcerated—they were of an irregular, hard, dark texture, but not materially altered from a natural size. On examining the region of the heart, the pericardium appeared to be wanting, or so filled with a

large mass that gave a hard spongy feel, that there was no distinguishing the heart from the pericardium, or the one from the other.—By dissecting carefully around this mass, and dividing the great blood-vessels, it was taken out altogether, and proved to be the heart enormously enlarged, with the pericardium firmly adhering to it in every part, and so firm was the adhesion, that in separating them, the dissecting knife had to be used for a great part of the process. Having finished this part of the operation, the heart was exposed, and was as large as that of an adult, and of a soft, spongy, yielding, fleshy feel. The ventricles, particularly the right one, were very much enlarged, and the right auricle was of a very uncommon size; the aorta was of a natural size and texture—the pulmonary artery was rather distended and its coats thin—the pulmonary vein was also considerably enlarged. An opening being made into the right auricle and ventricle, a large polypus, of a pale red colour, and spongy feel, was discovered rising from the parietes of the right ventricle, and extending to the left auricle, there enlarging to the size of hen's egg, distending and filling that cavity—a branch or elongation of it passed through the auricle, and ran into the pulmonary vein about two inches; it then divided into two branches, each two or three inches long, running into the branches of the pulmonary vein—at the superior edge of the ventricle at its union with the auricle, a small ossification had taken place—also, in the upper part of the auricle, the part farthest removed from the orifice of the ventricle, there was a second polypus about the size of a small nutmeg, and a small quantity of ossific matter near it.' ” 305.

Dr. S. denominates the above a polypus of the heart. We consider it a case of chronic inflammation of the organ, and most probably of that kind connected with a rheumatic diathesis. The polypous concretions, if not *post mortem* formations, were, we apprehend, of very recent origin, and not at all the cause of the various symptoms presented in the course of the disease. The case altogether is interesting and instructive.

4. *Neuralgia*.* M. Vaidy acknowledges that the *medicina expectans* is not very successful in tic douloureux. We suspect that the same remark might be extended to the Hippocratic treatment of many other diseases; though such a sentiment would be treason in France, where the powers of Nature are considered as almost omnipotent. We too are convinced of the great extent of Nature's powers—but it is principally her powers of doing mischief, when she ought, and perhaps means, to do good. What are the ravages of disease (as they are called) but the *erroneous* operations of nature? Will any one suppose that wet applied to the surface can produce abscess in the lungs? No; all, or almost all the disorganizations,

discovered after death, result from the ineffectual efforts or reactions of the system (denominated Nature) to repel the impressions of morbid causes. It is as much then—nay, it is more the duty of the physician to restrain the tumultuous movements of the constitution, than to aid Nature in her sanative processes. It is not improbable, however, that the "*medicina perturbatrix*" may be carried too far here, as the "*medicine expectante*" is on the Continent. And we think it would be much more wise and philosophical for each party, to calmly *examine* the customs of the other, rather than vaunt their own doctrines and practices as the superior ones. The reviewer of Dr. Clark's volume in the last Number of "*La Revue Medicale*," should have made himself acquainted with British medicine, before he pronounced us a faculty of *empirics*. Our Gallic brethren know exceedingly little, speaking generally, of the state of physic in England. They get hold of a few books, usually the very worst, and by these they judge of a whole nation. Thus it was a current opinion in France, that every English physician, on coming to the bedside of a patient with rheumatism, whether acute or chronic, began to "*pommel him*," "*à la Balfour*," without paying any attention to constitutional treatment. And so it is, that the eccentricities of an individual are sometimes taken up as characteristics of a whole people. It would be well, perhaps, for the French and British practitioners to *learn* from each other, rather than to *ridicule* or despise each other. Let them be assured that they have *both* a great deal to learn;—and that they have *both* much more reason to deplore their ignorance, than to boast of their knowledge.

Case 1. A soldier, 24 years of age, became a patient in the Military Hospital, Paris, for orbito-frontal neuralgia of the right side, coming on every day at 12 o'clock, and lasting four or five hours. It had continued more than a month. It was cured by exhibiting $\frac{3}{ss}$. of cinchona before the accession of the paroxysm.

Case 2. An orbito-frontal neuralgia, of the remittent kind, was treated, at first, by leeches, but without success. An emetic (three grains of tartrate of antimony) produced copious vomiting and purging; and in six days more the patient was discharged cured.

Case 3. Was an old man, of feeble constitution, afflicted with the same kind of neuralgia, returning every day in dreadful paroxysms. Leeches, applied in the line of the nerve, produced only a temporary relief; the cinchona was administered in doses of a drachm four times a day. In three days the disease was arrested; nor was there any relapse six months afterward.

Case 4. In this man the neuralgic affection was in the course of the internal saphena nerve, and regularly increased, in force, for two months. He entered the Military Hospital of Lille, 25th February, 1820. After baths, liniments, &c. had been tried in vain, 30 leeches were applied along the nerve. The blood flowed for 24 hours.

The patient was rendered very weak, but the disease was completely removed. We pass over the sixth case.

Case 7. A young man was seized instantaneously with such an excruciating pain in the left leg, along the external cutaneous nerve, that he was obliged to be carried directly to the hospital, during M. Vaidy's visit. The pain was so intense that the soldier cried out with anguish, and implored relief. Thirty leeches were immediately applied. The pain was mitigated by the evening, and next day it totally disappeared.

The 8th Case presented orbito-frontal neuralgia, coming on every day at nine o'clock, and lasting five or six hours. Leeches, emetics, the cinchona, all failed to produce relief. The extract of stramonium, in doses of half a grain three or four times in the day, stopped the pain, which did not return till a month afterward, when it came in the opposite side. The same remedy again removed it. In both instances the stramonium produced only a kind of drunkenness, not particularly disagreeable.

The 9th Case was similar to the 7th, being a neuralgia of the leg. Twenty-five leeches removed it.

The 10th Case, an orbito-frontal neuralgia was removed in a day or two by the extract of stramonium. In another case of neuralgia, in the line of the biceps muscle, twenty leeches were applied to the arm, with complete success.

M. Vaidy's *12th Case* was an affection of the sciatic nerve, from the hip to the foot, in which a tight bandage, extending the whole length of the lower extremity, removed the complaint.

M. Vaidy concludes that all neuralgiæ depend on an inflammation of the nervous tissues. In this sweeping conclusion we cannot agree. How do his sudden cures by bark, and by compression, tally with this opinion? We do not say that many, or indeed any of the above-mentioned cases were what is called real *tic douloureux* in this country. They were, however, *neuralgic* affections, of common occurrence, which are often untractable in their nature. That *TIC DOULOUREUX* is only the severest form of this class, many people believe. We should think, from what we have seen, that the *TIC* is more generally a sympathetic affection of a nerve, from irritation or disease at a distance, as in the viscera—while the common *neuralgic* affections, of the kind here related, depend, for the most part, on local irritation or inflammation of the nerve itself, or its neurilemma. On this account we recommend to our brethren in this country, a trial of the local blood-letting, on the scale practised in France. The application of five or six leeches, in such cases, is not sufficient. The number should be such as completely to drain the vessels of the part, and make a decided impression on the complaint, if possible.

5. *Consumptive Diseases.** In some interesting pathological observations on this class of human afflictions, Dr. Abercrombie first draws our attention to those diseases resembling consumption, and first to sympathetic cough, arising in some unknown way, from irritation seated in some other organ, or part. Nothing can be more certain than the facts, however we may choose to explain them. Valsalva found the cause of cough in the brain—Lieutaud in the frontal sinuses, there being purulent expectoration, without breach of substance in the lungs—De Haen, in the meatus auditorius and uterus. Every one has seen *nervous* cough. The most remarkable one in Dr. A.'s experience occurred in a stout plethoric young lady, continuing for an hour or more each paroxysm, and nearly strangling the patient. In the intervals, of four or five days, she was in perfect health. The cough was removed by full bleeding from the arm.

Nothing is more common than *stomach* cough. Indeed, when we consider the distribution of the *par vagum*, we cannot wonder at the frequency of respiratory disturbance from gastric irritation. Paroxysms of asthma are every day induced by indigestion, and coughs which resist every other means are frequently cured by laxatives, and especially alterative eccoprotics. In young females, particularly in the higher ranks, a feeling of oppression across the epigastrium, or fixed pain in the side, with paleness, languor, inappetency, insomnia, small frequent pulse, short dry cough, quick respiration on any exertion, alternate flushings and chills, costive bowels, and scanty menses, present a train of symptoms which create apprehension of incipient phthisis. It is most successfully treated by country air, gentle exercise, and a combination of tonics with gentle laxatives—especially sulphate of iron and aloes, two grains of the former, with as much of the latter as will keep the bowels free, thrice a day. Friction of the body is useful, but strong purgatives must be avoided. Warm clothing, the tepid bath, and ultimately the cold bath, complete the cure.

Every one must have seen cough, and uneasy respiration from hepatic affections. In these cases the cough is at first dry, but even this sympathetic irritation of the pulmonary lining membrane, if long continued, will be attended with expectoration of mucus, pus, or even blood. Deranged function or structure, in short, of any abdominal viscus, will occasionally produce cough, and very many of the phenomena of incipient consumption; hence the necessity of minute examination before we decide on the treatment, or venture on prognosis.

Hepatic abscess bursts sometimes through the diaphragm into the lungs. Here mechanical dilaceration adds organic to sympathetic disease, and death is too generally the result.

Laryngeal Phthisis is very often confounded with pulmonary consumption, and is a most formidable disease. There is frequent cough with purulent expectoration, sometimes blood, gradual emaciation,

hectic fever, and ultimately colliquative diarrhœa, the patient dying with all the symptoms of phthisis. Yet, on dissection, the lungs are found healthy, and ulceration is discovered on the inner surface of the larynx or trachea, sometimes with caries of the cartilages, or irregular fungous elevations of the mucous membrane. We have seen several cases of this melancholy disease. In every one that was carefully examined, the patient complained of some local pain or uneasiness about the larynx, when closely questioned, but not otherwise. Pressure will sometimes develope this pain. The voice is usually affected with hoarseness or huskiness, and is sometimes almost inaudible. The cough is generally in severe paroxysms, so as to excite vomiting sometimes. The laryngeal irritation being communicated to the mucous membrane of the lungs, a copious viscid expectoration from thence, streaked with pus or blood from the ulcer, is thrown up. Hence too the breathing is sometimes affected, or palpitation and other suspicious symptoms of cardiac affection induced. As the disease can only be expected to be arrested during the *first*, or inflammatory stage, anterior to ulceration, it is of the greatest consequence to detect it in its nascent movements; the treatment in such stage is obvious. Bleeding, blistering, antimonial, starvation, purgatives, quietude, and mercury, after the other means have been used, are the principal remedies. After *ulceration* has taken place, nature may, but art, we fear, can seldom, arrest the progress of the malady.

Laryngeal ulceration often occurs in conjunction with common tubercular phthisis—M. Bayle thinks as often as one in six—sometimes as the primary, sometimes as the secondary affection.

Of *chronic inflammation* of the mucous membrane of the lungs, imitating, and sometimes producing consumption, we have treated in our last number.

The lungs are not exempt from healthy phlegmonous abscess, which, bursting into the bronchiæ or cavity of the pleura, in great quantity, may occasion death. Or it may be spat up in pints or quarts for many days, leaving a cavity, like any other abscess, and, like any other abscess, healing kindly, or very protractedly, exhibiting most of the symptoms of pulmonary consumption, and sometimes wearing out the patient with hectic fever.

On hæmoptysis and its consequences Dr. Abercrombie makes many interesting observations; but we doubt whether the different modifications which he has set forth of this alarming accident, can be easily distinguished in practice. The *first* modification is that from turgescence of the pulmonary vessels, whether from obstruction to the blood's return to the left side of the heart, produced by disease of the heart, or induration of the lung itself. This state resembles simple apoplexy, and by the French it has long been termed so. It may be called *acute hæmoptysis*, and requires the same treatment as pneumonia. Under such treatment it will generally do well. The breach of continuity in the lungs resembles that from a cutting instrument, healing by the first intention, or advancing to suppuration and purulent expectoration. In sound lungs this last



process may terminate in health—in scrofulous constitutions, it too often ends in consumption.

In the *second* variety, our author thinks the blood comes from the vessels of the bronchial membrane, preceded and attended by less dyspnoea and thoracic oppression, than in the *first* species; but rather with a sharp irritating cough. The blood is in smaller quantity, and mixed with frothy fluid in the early stages—afterward with bronchial expectoration. It is nearly allied, if not always accompanied by, inflammation of the bronchial membrane, often followed by purulent expectoration and all the phenomena of phthisis, affording, however, a more favourable prognosis. It is, like the *first*, an acute disease.

The *third* modification is *chronic*; apparently resulting from immediate rupture of a vessel, the consequence of disease in its coats. The subjects are pale, feeble, and scrofulous-looking, the pulse being weak and low. It seems connected with tubercular disease. It is apt to terminate in phthisis, or dangerous chronic disease of the mucous membrane.

In the *fourth* variety the vessel gives way from ulceration, in true consumption. It is preceded by purulent expectoration. It is generally fatal; and at best, admits only of palliation.

To these various affections resembling consumption, Dr. A. thinks we might add some remarkable cases in which the symptoms were kept up by extraneous bodies lodging in the bronchia, of which Mr. Howship has published a remarkable case, and Mr. Arnott another.

Dr. A. has offered these observations as a slight and imperfect outline, leaving it to others to fill up the detail. He has industriously collected cases in illustration from various quarters, for which we refer to the excellent paper itself. Dr. A. has laid the profession under great obligations to him for his zealous and able endeavours to advance the science of pathology.

¶ 6. *Colchicum*.* Dr. Williams, in this paper, again calls the attention of the profession to the beneficial effects of the colchicum, in venereal rheumatism, and other painful diseases—showing the superiority of the seeds over the root of the plant. Dr. W. thinks venereal rheumatism is invariably an asthenic disease, seldom accompanied by pyrexia or hectic—occasionally by eruptions and blotches on the skin, and by nodes—“always by emaciation, and by pains affecting principally the bones and larger joints.” Affections of this kind, he thinks, have deprived the army and their country of many brave young men, its brightest ornaments. In three cases of this kind he has found the *vinum colchici*, of which we gave the formula in our first number, afford not only almost immediate relief, but an early cure. He thinks it necessary, however, to caution the medical prac-

* Dr. Williams. Med. Repos. No. 85. Jan. 1821.

itioner against the too sanguine expectation of success, when the patient is afflicted with acute pain in the bones or their fibrous coverings, arising from nodes. For the detail of cases the reader must refer to the journal quoted. The vinum colchici was generally administered in doses of a fluid drachm, or a drachm and a half, twice a day in water.

In those distressing pains in the back, loins, or chest, arising from deranged actions of the uterus—and in those anomalous pains to which young females are subject, prior to puberty, our author has experienced the most decided testimony of the safety and efficacy of the medicine; but the state of the bowels should be attended to, and fruit, fish, broth, fat meats, eggs, pudding, and pastry avoided, diminishing, by one half, the usual quantity of drink. Dr. Williams thinks the superiority of the seeds over the roots of colchicum proved almost to a demonstration. The latter he characterizes as “an untractable, because a most capricious, remedy.” In a recent case, he says, the root proved fatal. The seeds, on the contrary, he thinks have the justest pretensions to uniformity of effect.

7. *Whooping Cough.* Dr. Robertson (in the January No. of the Medical Repository) has made some observations on the treatment of this disease, considering it as at first spasmodic, but afterward inflammatory, he properly recommends as much of the antiphlogistic treatment as may be necessary to guard against the consequences of inflammation in the respiratory apparatus, appeasing the cough by belladonna, rather than cicuta or hyoscyamus—determining to the skin by warm clothing, tepid bath, small doses of antimony, and a gently open state of the bowels. Sudden changes of temperature are to be avoided, although there is seldom any necessity for preventing children, of previously sound constitution, from moderate exercise in the open air. Of all the remedies, however, which our author has had occasion to employ in whooping cough, frictions, on the region of the stomach with the tartarized antimonial ointment, have been the most undeviatingly useful. The eruption on the stomach is frequently accompanied by a moderate degree of inflammation about the pudenda, in females, with a slight eruption of minute pimples—on the occurrence of which, the disease, he avers, uniformly begins to abate. He reprobates the indiscriminate exhibition of emetics in whooping cough, as endangering congestion in the brain, and even in the lungs. The object of determining to the surface by emetics may, he thinks, be effected by other and safer means;—and as for evacuating the phlegm or mucus from the lungs, he questions their power in effecting this object. We think our author has erred in his observations on this head. The theory of the action of vomiting is by no means clearly ascertained; but we have seen such decided expectorating effects from emetics, both in whooping cough and other diseases, that we cannot consent to be argued, on theoretical principles, out of the facts which we have witnessed,

without any theory on the subject. The preceding observations apply principally to the disease in its early stages. In the chronic state of the disease our author questions the general utility of change of air—and especially the opinion that, if it do no good, it can do no harm. He has seen some lamentable instances to the contrary. He thinks the removal should be but a short distance from home, “and the new abode should be chosen in every thing resembling the former one,” avoiding elevated and exposed situations, as well as those that are too low and damp, or within the range of exhalations from stagnant waters or flooded meadows. Inland situations are preferable to the coasts. The advantages of change of air, he thinks, may sometimes be obtained by change of rooms and habits, at home. Upon the whole, we think favourably of this paper, though differing from the author on several points.

8. *Disease of the Heart.** In our last No. p. 458, we detailed a very remarkable case of *apparently* organic disease of the heart, terminating favourably, after a train of symptoms, that seemed to dissipate the most distant prospect of recovery. We have here to state another case that, at one time, appeared nearly as formidable as that related by Dr. Gogiran, at Thoulouse. Physicians are too apt to despond, and give unfavourable prognoses when they meet with *symptoms* of organic disease of the heart. But they should recollect that disordered function will assume every symptom, and exhibit every phenomenon of incurable change of structure in the organ of the circulation; and that, in reality, there is not any certain diagnostic by which we can positively decide between the two affections; consequently we are to be guarded in our prognosis, and use means of relief in every instance before we give the case up as hopeless.

Dr. Robbins states that, on the 14th July, Mrs. Smith, a widow, 39 years of age, was visited by him, in a narrow and dirty close, in Edinburgh, where he learnt the following history. In the beginning of January, she was attacked with violent throbbing about the region of the stomach, and also about the heart, increased by any exertion of ascending an acclivity. Her respiration was short and difficult—expectoration of mucus and blood—sense of weight and suffocation at the chest, much increased by the recumbent posture, especially on the right side—no appetite—bowels regular—night sweats—urine natural—œdema of the lower extremities—pain in the right shoulder and arm. No thirst or fever—great weakness and emaciation. These symptoms had continued without abatement till April, when she sent for Dr. A——, who bled her, and pursued a strict *allopathic* treatment, which considerably relieved her.

About *two* weeks ago, all the former symptoms returned with unusual violence, as she could not lie down at all, and the little sleep

* New-England Journal, October, 1820.

she has got in the sitting posture, is attended with frightful dreams, and fits of coughing.

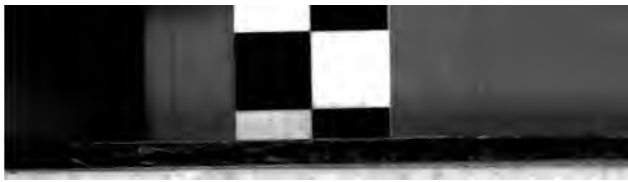
"The heart beats with such violence that I can easily count its pulsations at the distance of several rods. Pulse 130, small, hard, quick, and wiry. Her countenance is anxious and sunken—mind gloomy; bowels perfectly regular—night sweats profuse, and debility extreme—dyspnœa and cough violent, but no expectoration of blood—the lower extremities are swelled, and the shoulders and joints painful." 343.

Dr. R. ordered her digitalis and sulphuric acid. July 15th, bled her to 25 ounces; the same medicines. She slept better this night than she had done for a long time. Still "the violent beating of the heart continues to raise the integuments high above the usual level." Pain in shoulder and arms continues, with sense of fulness and heaviness in epigastrio. In a few days she found herself much better, and was able to lie down and get some sleep. On the 19th July, "a pulsating tumour extends high above the right clavicle, which communicates to the finger pressing it a strong thrilling sensation." The same medicines, with a blister to the chest. On the evening of the 21st, she had a fit of vomiting, and was much worse. She confessed she had "ta'n a wee drap o' Highland whiskey." After this she got a little better; but on the 29th July she was all back again.

"Has had constant nausea these two days—pain in the chest and cough begin to return—pain in the arms exceedingly severe, sharp, and lancinating, so as to prevent her from sleeping, and their soreness extreme; they are considerably swelled, as also are the hands. The beating at the heart is more violent, and palpitation of the tumour above the clavicle more strong than ever. Pulse 84. She has no appetite, and her countenance looks anxious again." 344.

An anodyne medicine was given thrice a day. On the 31st July, she vomited a considerable quantity of blood, succeeded by syncope, which was removed by cordials. After this the symptoms were signally mitigated, while taking the anodyne medicine. Her appetite returned—the pain left the arms—the heart regained its tranquil action—"the palpitation above the clavicle is scarcely perceptible"—pulse 84 and natural—in short, by the 9th of August, she was in as good health as ever she had been in, and continued so.

Our author heads the case as "Organic Disease of the Heart," and closes it with these words:—"The disease which I have related, was an effusion of a watery fluid between the heart and pericardium, succeeding inflammation of those organs." We are very far from believing the disease to have been either an *organic* affection of the heart, or hydro-pericardium. Had it been either of these, Dr. Robbins would not have restored her to perfect health in *twenty-five days*. We conceive (for we would not be positive as our author) that the disease was a pulmonary affection, relieved by the vomiting of blood; and that the cardiac symptoms were sympathetic.



9. *Ruptured Tendo Achillis.** Personal experience is far superior to all other kinds. Dr. Edmonston ruptured the tendo achillis in dancing. A week, passed under bandage and rest, produced little amendment, especially when the least motion was attempted. Dr. E. now shaved the leg, and applied adhesive straps along the whole of it, from the ankle to the knee, making them overlap by several inches, and causing them to produce equal pressure. Over all was put a tight elastic worsted stocking. In three days after the application of the straps, he could walk with the aid of a stick, dragging, of course, the injured leg after the other. He continued to walk two weeks longer in this guarded manner, and soon recovered. Dr. E. thinks, and probably with justice, that, in all sprains, some fibres are either actually ruptured, overstretched, or so bruised as not to be able to contract or relax as in health. In such cases, he has employed adhesive straps, so as to give a uniform support, with much advantage. We think the suggestion an ingenious one, and likely to be practically useful.

10. *Stomach affected by cold water.†* There is strong reason to believe that the stomach may be seriously injured by gelid potations, even where there is no preternatural exhaustion of the system, or perspiration on the skin. The following case is illustrative of this supposition.

"S. M. G.,—the subject of these remarks, is a young man of about 21 years of age, of very delicate constitution, and of a pulmonary predisposition. He is by occupation a store-keeper, and has been in the habit of walking to and from Philadelphia (a distance of about 16 miles) in warm weather, generally once a week, and had performed one of these journeys but two days previous to his attack. On the 26th of June, at about twelve o'clock, his father perceived him on the shop counter, in a reclining position, as though he were asleep, but of so pallid a hue as to induce the belief that he had fainted. On examination, he was found to be in a state of complete syncope; and when I saw him (not fifteen minutes afterward) he was without pulse, his wrists cold, and in short, to all appearance lifeless. I began immediately to use external stimulating applications of various kinds, such as sinapisms, water, almost boiling hot, to the extremities, frictions with hartshorn, spirits of turpentine, &c. For half an hour, there was scarcely any pulsation perceptible: the respiration was at long intervals and laborious, and the jaws were so locked, as to render it almost impracticable to introduce any thing into the stomach. During this time, no cause could be assigned for the attack, as he had not been fifty yards from

* "Dr. Edmonston, *Ed. Journal*, 66.

† Dr. Mitchell, *New-York Repository*, Jan. 1820.

the store, nor engaged in any sort of fatiguing employment. Presently, however, he was seized with violent spasms of the stomach, which continued for two or three hours; to relieve which, I gave a tea-spoonful of laudanum every fifteen or twenty minutes. I now suggested the probability that my patient had been drinking freely of cold water, which, acting on his empty stomach, had produced all the unhappy symptoms. I found that the accident occurred just before the usual dining hour of the family, and that my patient had eaten nothing since his breakfast; but no one knew any thing relative to the cold water, nor were any of the family disposed to believe that a person could be injured by cold water unless previously heated. Caring but little, however, for the cause of the attack, I persevered in the use of the external and internal stimulants, until twelve bottles of mustard, and three of Cayenne pepper, were consumed, together with a quantity of other articles. At about six o'clock, p. m. and not until then, he spoke a few words, but soon relapsed into a state of stupidity, the spasms of the stomach having been nearly removed. The treatment was continued as rigorously as before, until nine o'clock at night, when he again spoke, and held a conversation of some length. During this conversation, he was interrogated relative to the cold water; and he assured me, that the last thing he could remember, previous to his attack, was, that he took a free draught of cold water, from a particular pump in the borough, which he specified, well known as the coldest water in the neighbourhood." 810.

11. *Ligature of the common Iliac Artery.** Accidents or diseases requiring the ligature of the second largest vessel in the human body will not often occur. Yet they may happen again, as they have already happened, and, consequently, it is proper to place on record the following case, the detail of which, however, we shall considerably abridge.

During the riots of 1812 in Baltimore, a labouring man, 38 years of age, received a musket shot, which entered the left side of the abdomen, passed through the intestines, and lodged in the sacrum. Dr. Gibson was on the spot. A gush of blood came from the wound. The man being of a thin habit, Dr. G. by thrusting the fore-finger of his left hand into the wound, reached the orifice of the bleeding iliac artery, and stemmed the hæmorrhage. The moment he removed his finger the bleeding returned. He, therefore, kept the wounded artery pressed, till Drs. Owen, Hall, and several other medical gentlemen, came to his assistance. He determined on attempting the ligature of the artery. We deem it proper to give the steps of the operation in Dr. Gibson's own words.

* William Gibson, M. D. Professor of Surgery in the University of Pennsylvania. *Med. Recorder*, April, 1820.

"Still continuing my finger within the wound and pressed upon the artery, I commenced the operation (in the presence of Colonel Mitchell of the United States army, Drs. Owen, Hall, and several other medical gentlemen,) by dividing the integuments and muscles of the abdomen, above and below the wound, to the extent of seven inches. The peritoneum was next cut through, the intestines turned to one side until the artery was exposed and slightly detached from the parts in its immediate vicinity. I now attempted to pass the common aneurismal needle armed with a large ligature, under the artery; but owing to the want of flexibility in the instrument, and the depth of the cavity, I found it impossible to secure the vessel.* I then requested Dr. Hall to pass the ligature through the eye of a common flexible silver probe, curved to rather more than a semicircle, which being conveyed under the artery, the ligature was applied, but not without some difficulty. I now found that I had tied the left iliac communis artery, and the pulsation above the ligature could be distinctly perceived, although the circulation, in the upper and lower extremities, was very feeble. I waited for some minutes, to see whether the blood would flow from the lower portion of the artery, but no hæmorrhage taking place, I turned my attention to the intestines, which were wounded in two convolutions. I placed a small thread upon each opening, and drew it with moderate firmness, so as to close up the wounds and prevent the effusion of fecal matter into the abdomen.† The extremity of each thread was cut off near to the intestine, the other was brought forward and secured at the external wound. The large ligature which embraced the artery,

* "If I had had the simple but ingenious instrument invented by my friend, Dr. Physick, twenty years ago, viz. a forceps, holding in its extremities a blunt curved needle, with an eye through which the ligature is passed, I should have experienced no difficulty whatever, in taking up the artery. For an account and drawing of this instrument, see Dr. Dorsey's valuable work, the *Elements of Surgery*."

† "I preferred including the openings of the gut with ligatures instead of sutures, knowing that I could easily cut them away, if any urgent symptoms should follow their application. I was likewise induced to make the experiment, from knowing that Mr. Astley Cooper, and some others, had drawn together apertures in sound portions of intestines by ligatures, after the operation for strangulated hernia, with success; and that experiments on animals had been made with similar results. It is proper to mention in this place, however, that a ligature applied to a piece of intestine, in the manner described, has often been productive of the worst effects. Dr. Physick tried the experiment many years ago; but a violent colic pain, which immediately supervened, obliged him to cut away the threads. On the other hand, I may state, that in a patient of Dr. Martin, of Baltimore, upon whom I operated about three years ago, for strangulated inguinal hernia, and in whose intestine a rent was found of considerable size above the stricture, the ligature was tied, so as to draw the edges closely together, and the ends of the thread were cut off near to the knot. No inconvenience followed the operation, and the patient recovered in the usual time."

was likewise fastened externally, one end being previously divided near the knot. The clotted blood which was found in the neighbourhood of the wounded vessel, and in the cavity of the abdomen, in considerable quantity, was carefully removed; and upon doing this, a slight hæmorrhage took place from the lower portion of the common iliac. The bent probe was again carried beneath the vessel, and the ligature drawn so as to stop the bleeding. The parts were now permitted to close up, and to occupy their former situation; and the edges of the external wound were kept in contact with each other by adhesive straps, and a slight dressing. The operation was severe and protracted, and the patient reduced exceedingly low. A pupil watched him during the night, and kept the limb continually covered with warm flannel, and bladders filled with warm water applied to the foot." 187.

2d day. The patient passed a restless night, having had spasmodic twitchings of the left thigh and leg. Pulse at the wrist fuller and stronger—abdomen not swollen or tender—left lower extremity warm.

3d day. Patient still better—passed urine and fæces freely—freer from spasms, probably in consequence of having taken 15 drops of laudanum every three hours—countenance somewhat flushed—pulse increased in frequency—pain on pressure of the abdomen. "The warmth of the thigh has increased, but the knee, calf of the leg, and foot, are cold, and comparatively insensible."

4th day. Patient passed an uncomfortable night, notwithstanding the laudanum. Complains of intense headach—tongue furred—great thirst—gastric irritability—inappetency—urine highly coloured, fæces very fetid—pulse 140. The temperature of the thigh has not increased much, but the leg is warmer. Complains much of the sole of the foot—abdomen more swelled and painful than yesterday—considerable thin offensive discharge from under the dressings. The dressings being removed, the wound gapes, and shows no sign of granulation. A large blister to the belly.

5th day. Patient extremely restless and delirious—pulse very quick and irregular—heat of the whole limb materially increased—wound not improved in appearance—matter more offensive—swelling of the abdomen undiminished.

6th day. Patient feels relieved, and passed a good night—thirst diminished—urine not so high-coloured—"heat of the left thigh greater than that of the right, but the foot yet remains very cold." Abdominal tumefaction the same—discharge from the wound copious, and mixed with large clots of blood—pulse 130—patient very weak.

7th day. Little variation in the general symptoms.—"The limb appears to be well supplied with blood, and the heat of the foot is nearly equal to that of the opposite side."

8th day. Edges of the wound sloughy, with some appearance of adhesion at certain points. The discharge is mostly of an offensive kind, and mixed with blood. The heat of the thigh and leg is still greater than that of the opposite side.



9th day. A tremendous hæmorrhage. On removing the dressings and coagula, the bottom of the wound could be reached by the finger—the vessel was felt distinctly pulsating above the upper ligature but no blood flowed.

10th day. A gush of blood at 10 o'clock to-day, which soon stopped.

11th day. Symptoms all of the worst order; but he lingered out with occasional hæmorrhages, and all the phenomena of abdominal inflammation, till the 15th day, when he expired.

"Dissection.—On opening the abdomen a few hours after death, a very large quantity of air was extricated; and a dark brown fetid matter, mixed with blood, issued from the wound, in the neighbourhood of which it was extensively diffused. The intestines were glued to each other in every direction, bearing evident marks of violent preceding inflammation. A small opening was discovered in the intestine, from which the ligature had separated; but an adjoining convolution had adhered to it so closely, as nearly to block up the cavity. The other ligature retained its situation, being loosely connected to the everted edges of the wounded gut, and surrounded, for some distance, by coagulable lymph. The peritoneum adhered to the sides of the wound, and in several spots to the surface of the intestines. It appeared to have suffered, more or less throughout, from inflammation. No fecal matter could be found effused into the cavity of the abdomen.

"Upon inspecting the vessels of the abdomen, I found that I had placed two ligatures upon the *common iliac* artery of the left side; one about half an inch below the bifurcation of the aorta, and the other immediately above the division of the artery into the external and internal iliacs. The upper ligature was found detached from the vessel, which projected and preserved the circle of its mouth entire. Its cavity, as well as that of the aorta, for a short distance, was blocked up by a recent coagulum of blood. The coats of the artery at its extremity had retained the impression of the ligature, and were of a pale blue colour throughout the margin of the circle. *No union whatever had taken place.* The extremity of the lower portion of the *iliaca communis*, was still embraced by the ligature; but on dividing this with the knife, and splitting the cavity of the vessel, I found that a partial adhesion only had been produced, and there was no vestige of a coagulum. The blood had injected the cellular membrane in the vicinity of all the large vessels, and had almost separated the *iliaca communis* and lower part of the aorta from their connexions. The bullet was found imbedded in the upper and left side of the sacrum. Having proceeded thus far, I was interrupted by a jury of Inquest, assembled to examine the body. I had made arrangements to inject the limb, in order to ascertain the precise manner the blood had found its way to the lower extremity; but the friends of the patient would not listen to the proposal, and the times were too tumultuous to attempt to accomplish my purpose without their approbation." 191.

Our surgical readers will readily grant, that little hope could have been entertained of success in the above case, from the beginning. Yet it is surely important to know, that the common iliac trunk may be tied without cutting off permanently, the supply of blood to the lower extremity, since the operation may possibly become necessary in cases of aneurism. It is on this account that we have laid a full analysis of the paper before the British Public.

XVIII.

MISCELLANIES.

SOME ATHENIANS of the profession have observed that the pages of the Medico-Chirurgical Review are not sufficiently pregnant with attic salt and criticism. We have again to state, that we do not spend our midnight hours by the lamp, to gratify the fastidious palates of critics, but to diffuse useful information among those who are actually and zealously employed in the practice of their profession. Neither are we so utopian as to expect to please every class of readers. We have good reason to know that our plan gives satisfaction to the great mass of medical society, and as for the critical tribe, we are extremely indifferent whether or not they honour us with their notice. What is criticism after all, but the opposition of one man's opinion or sentiments to those of another?—the judgment of an anonymous, *versus* that of a known writer? Whenever criticism, especially in scientific matters, runs beyond plain and liberal commentary, it is too often founded in self-conceit, prejudice, or unworthy feeling.

Mature reflection and some experience have convinced us, that the surest way of doing justice to an author is, to enable the *Public* to form their judgment from an impartial analysis of his work. In *this* case the judgment is always just—when the reviewer takes the decision entirely into his own hands, he is not seldom wrong. To the Public at large, the advantages of analysis over criticism are beyond all comparison. In the former case they have *things* set before them—in the latter, *opinions*. We know pretty well which they prefer, and we shall act accordingly.

Obituary.

DR. DICKSON of Clifton, has lately announced the death of Mr. BAYNTON of Bristol, and paid to the memory of his friend the last tribute which friendship can bestow—“*in cineres cum corpore jacent.*” To those around him, he was well known for the goodness of his heart, and the kindness of his disposition. “Sanguine in prognosis, and successful in practice, he was equally fortunate in gaining the confidence, and in preserving the friendship, of his patients, by a large circle of whom, he is deeply and deservedly regretted.” It is in vain to deplore the inevitable stroke of that sword

which—"florem roboris, et seræ spem præsidiumque senectæ prostravit." The best incense we can offer at the shrines of the dead, is the imitation of their virtues.

Experiments on Hydrophobia. "By M. MAGENDIE, M.D.

M. MAGENDIE remarks that, both in animals and men labouring under Hydrophobia, the most active substances, the most powerful narcotics, have no perceptible operation. This holds good, not only as to matters taken into the stomach, but injected into the veins. For instance, he has injected into the veins of dogs that were hydrophobic, large doses of opium, (ten grains) without any perceptible narcotic effect; while a single grain produced eight or ten hours of somnolency in a healthy animal of the same species. It was the same in man. M. Dupuytren and our author injected into the radial vein of a young man, in rabies canina, about eight grains of the gummy extract of opium, without any apparent result. Prussic acid was also injected into the vessels of dogs, with the same want of effect. M. M. Magendie and Breschet inoculated a healthy dog with the saliva of the young man above-mentioned, by inserting some of the fluid under the skin of the forehead. The animal became mad at the end of a month. Two dogs, bitten by the latter, became affected with hydrophobia in forty days. These last bit several other dogs, but without effect. So that, according to these experiments, the virus becomes innocuous in the third inoculation or generation. But to come to the main experiment of this paper.

The proprietor of a kind of menagerie, in Paris (*le combat des animaux*,) sent for M. Magendie to see a very large and strong bitch, in a high state of rabies. The constant agitation of the animal—hoarse and short barkings—and fierce expression of the eye, convinced our author that the animal was hydrophobic. Early next morning, M. Magendie, attended by several of his most zealous pupils, secured the animal, with some difficulty and hazard. M. Magendie then opened the left jugular vein, and drew off about sixteen ounces of blood; after which, he injected nearly forty ounces of water, during the latter part of the operation, however, permitting ten or twelve ounces of blood and water to flow from the upper part of the orifice. The injection finished, the dog was let loose into her den; and to their great surprise, coiled herself up and lay down, as if to sleep, in the most perfect state of calmness. The fierce expression of the eye was entirely gone—she did not bark, and only ground the teeth, when a stick was put into her cage. M. Magendie waited an hour, during which the animal lay perfectly quiet. Some pupils were left to watch her. About five hours afterward, she was seized with a difficulty of breathing, which increased, and killed her in half an hour more. On dissection the brain, spinal marrow, and all the organs, excepting the lungs, were sound. The lungs were gorged with watery blood, and the mucous membrane appeared inflamed. M. Magendie, before the fatal termination of this case, accused himself of having injected too much water, and

anticipated effusion in the lungs. What led him to this experiment? It was from observing that, in artificial aqueous plethora, the various functions of the animal, especially those of the nervous system, were very evidently enfeebled. Now, in rabies, the excitement of the nervous system is carried to its utmost limit; and hence he was naturally enough led to try the sedative effects of aqueous injection and bleeding. Moreover, from the time an animal becomes mad, he ceases to drink; while the pulmonary and cutaneous transpirations are in full force. Hence he found the blood of rabid animals thick, and apparently without serum. Upon the whole, this experiment, though unsuccessful, holds out a ray of hope in this hitherto incurable affliction.—*Magendie's Journal of Physiology*, No. I. January, 1821.

Journal of Experimental Physiology, conducted by Dr. MAGENDIE.

We have received a letter from Dr. MAGENDIE, enclosing the prospectus of a Quarterly Journal of Physiology, founded solely on facts: the first number of which appeared in January, 1821, consisting of about 100 pages. The well-merited reputation which this physician has long enjoyed, as an experimental physiologist, will doubtless ensure a favourable reception, in the Medical World, for a periodical work dedicated to so interesting a subject, and one so little advanced as Physiology. We have taken steps to exchange Journals with Dr. MAGENDIE, and shall embrace the earliest opportunity of giving a more particular account of the work now announced to the British Public. See preceding article.

EXTRA LIMITES;

OR

DEPARTMENT FOR DISQUISITIONS, DEFENCES.
EXPLANATIONS, &c. &c.*

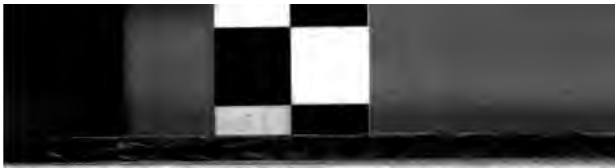
I.

Dr. Jenner's Circular Letter to the Profession.

SIR,

PRESUMING that you are conversant with the practice of Vaccine Inoculation according to the instructions which I have formerly published, and that you may have seen, in addition to my general observations, those which I have since made and promulgated, respecting the "Varieties and Modifications of the Vaccine Pustule, occasioned by an

* As this department is entirely beyond the standard limits of the Review, the conditions of insertion may be seen in No. III. p. 551.



herpetic and other eruptive states of the skin," I take the liberty of requesting to be informed, whether the observations acquired in your own practice coincide with mine? That is to say, whether the Vaccine Vesicles, under these contingent circumstances, go through their course with the same regularity, as when the skin is free from diseases of this description?

Secondly. Whether, on the other hand, such individuals are more liable to resist the legitimate action of Vaccine Lymph when inserted into the arms, than those who are free from such eruptive affections?

Thirdly. Whether you have met with cases of Small-Pox, or what has been termed the Varioloid Disease, after Vaccination; and if so, whether in such cases, you ascertained those deviations at the time of Vaccination, in the progress of the pustules on the arms, which I have described as liable to take place when the skin is affected with herpetic and other eruptions?

As you may not have the paper before you, to which I here allude, nor the short series which followed it, I will point out the periods of their publication, and where they are to be found. The first was published in the *Medical and Physical Journal*, No. 66, for August, 1804, and gives an outline of the subject of some extent. It points out the fact, that a single serous blotch upon the skin, existing during the progress of the Vaccine Vesicles on the arms, may occasion such irregularity and deviation from correctness, that Vaccination under such circumstances, cannot be perfectly depended upon.

I have found abrasions of the cuticle to produce the same effect; such, for example, as we find in the nurseries of the opulent, as well as the cottages of the poor, behind the ears, and upon many other parts where the cuticle is thin. Happily we find no irregularity in the Vaccine Vesicle in an uncontaminated skin; but we find it if the skin is beset with these herpetic blotches, or even simple serous oozings from an abraded cuticle. It is not to be considered as of less consequence when occupying a small space; a speck behind the ear which might be covered by a split pea, being capable of disordering the progress of the Vaccine Vesicle. Dandriffe may be considered as a malady of this class, the incrustation on the scalp being formed from excoriation beneath; and however slight, for there is every gradation between a thin scurfy layer of a dirt-looking substance, or even patches of this thin crust, and Tinea itself. However, fortunately for the safety of the Vaccine Practice, and fortunately too for the ease of the practitioner, all these affections of the skin

may be removed with very little trouble.* Sore eyelids are also impediments to constitutional Vaccination.

The second paper relating to this subject was given by the late Dr. Willan, in answer to the following interrogatory, addressed to me by himself:† "What are the changes produced in the vesicle, when a person is affected during Vaccination, with the Shingles, the Vesicular Ringworm, or Impetigo?"

To this question I made a full, and, I believe, a satisfactory reply. Its purport will be shown by quoting a few sentences from it. "To answer this question in its fullest extent, would lead me through a wide field of observation, which I mean to go over at a future time; but the following answer may probably convey to you as much information upon the subject as you may now require." "Vaccination, under the circumstances you mention, usually produces a striking deviation from the perfect character of the Vaccine vesicle at some period or other of its progress, but more frequently in its early, than in its declining stages; indeed, it is commonly perceptible in a day or two after inoculation. It would be difficult, perhaps impossible, without the aid of drawings, to give a correct description of the varieties which an herpetic state of the skin is capable of producing, from those trifling deviations which prove no impediment to the Vaccine security, up to that point of imperfection in the vesicle which affords no security at all. Perhaps I commit an error in saying "*no security at all*," for it strikes me, that the constitution loses its susceptibility of Small-Pox contagion, and its capability of producing the disease in its perfect and ordinary state, in proportion to the degree of perfection which the Vaccine vesicle has put on in its progress, and that the Small-Pox, taken subsequently, is modified accordingly.‡

* The most effectual application which I know for subduing these cuticular diseases, that produce impediment, is the Unguentum Hydrargyri Nitratis, as much lowered with Unguentum Cetacei, or any other bland ointment, as the irritability of the subject may require. The Dandriffe demands a double process—the *first* consists in removing the incrustation, the *second* in subduing the oozing. There are skins that will not well bear unctuous applications; the desiccative lotions may then be made use of two or three times a day; such as those prepared with the sulphate of zinc or superacetate of lead, &c.

† It was published in the year 1806, in his Treatise on Vaccine Inoculation.

‡ Further observation has confirmed this opinion, and has also developed much other curious matter respecting the spontaneous blending of the herpetic with the vaccine fluid, through the medium of the constitution, when under the influence of Herpes.

When no deviation takes place in the ordinary course of the Vaccine vesicles, or when it is inconsiderable, the Herpetic blotches or vesicles, of whatever kind they may be, often assume (sometimes as early as the third or fourth day after the insertion of the Vaccine fluid) a new character, not unlike the Vaccine, and, keeping pace in their progress with the vesicles on the arm, die away with them, leaving the skin smooth."

These two papers comprehend, first, the simple fact of important deviations being produced by diseases in pre-occupation of the skin; and, secondly, a general account of the characters of these deviations, and their differing degrees of influence upon the Vaccine protection.

Some further observations were published by Dr. Wilson Philip, M.D. of Worcester, now of London, in an Appendix to his Work on Febrile Diseases, who requested some information from me on this interesting subject. This letter goes more into detail than the former, though its purport is the same—namely, to guard the practitioner against the insidious influence of a diseased skin, when he vaccinates. It will be an object of future consideration, to enter more generally into the minutiae of this subject; but a sketch like this does not afford scope for the completion of such a design. Let me advise every practitioner, not to confine his cautions, nor to narrow my meaning, to one class of eruptive affections. In short, every disease of the skin, which may be called *serous*, or one that sends out a fluid capable of conversion into a scab, has the power of exerting this modifying and counteracting influence; and I have also seen purulent fluids exert a similar influence in producing deviations. If I was asked what were the other actual impediments to perfect Vaccination, as a general answer I should say, that I scarcely know any other except spurious matter,* or impediments too obvious to require my naming them here, such as deranging the Vaccine vesicle in its progress, by incautiously robbing it of its contents, or producing a new action by external violence.

I have the honour to be, Sir,

Your obedient humble Servant,
EDW. JENNER.

Berkeley, 28th January, 1821.

* I am happy to see that these interruptions are now discovered in Germany, as appears in Professor Hufeland's Journal for June, 1819; an extract of which is given in the London Medical Repository, vol. xiv. p. 502.

In addition, see Bateman's Synopsis of Cutaneous Diseases, pp. 222, 223. Cross's History of the Variolous Epidemic at Norwich, 1820, pp. 60, *et seq.* 196, and 288. I was lately puzzled to find the cause of irregularity in a Vaccine vesicle, the skin being free from any apparent eruption; upon minute inquiry I discovered a whitlow on the thumb, in which suppuration had taken place.

II.

Dispensary for Diseases of the Skin, Great Marlborough-Street, under the Patronage of his Royal Highness the Duke of York, and other distinguished personages.

Consulting Physicians, Dr. Bateman and Sir Mathew Tierney, Bt. Physicians, Dr. Thomson, Dr. Vetch, and Dr. Ashburner. Surgeons, Mr. Carpue and Mr. Wadd.

WE are gratified to find, from a Report of the Committee to the Patrons of this very meritorious Institution, that between the 1st January, 1820, and the 1st January, 1821, 245 cases of cutaneous complaints were treated, most of them being cured, and almost all relieved. "The eminent relief and comfort experienced by many indigent families in various parts of this extensive metropolis, from the use of the baths and medicines gratuitously supplied to them, afford unequivocal proof of the utility of the Institution. Small as is the number of patients admitted, compared with similar institutions of other capitals, yet the *variety* of cutaneous diseases, we understand, was such, that almost every one described in Willan's splendid work has been seen here.

"One, among many remarkable and instructive cases the Medical Officers wish to bring under your notice.—It was an inveterate instance of the pompholyx, which had resisted the various treatments of several hospitals.—It occurred in a young girl; her sufferings were not to be described; but by the use of the bath, and some internal medicines, she now enjoys a comparative degree of health and comfort; and her tender age renders it extremely probable that the cure may be as permanent as it has been satisfactory." *Report of Committee.*

Many of the most distinguished medical characters in the profession (among whom we need only instance a Halford and a Bailie) have patronized the Institution, and we conceive that it is only necessary to make its existence known to a liberal public, in order to secure a still greater support. To the profession we think it is a most desirable thing, that an Institution, directed by medical officers of such respectability, should be at hand to assist the remedial treatment of a class of diseases, many of which have hitherto proved opprobria to the healing art.

BIBLIOGRAPHICAL RECORD.

IN return for the favour of works transmitted to us by authors or publishers, we shall give the *full title-pages*, so as to form a complete record of the works so received, the advantages of which, to the authors and publishers, are sufficiently obvious. Such gentlemen, however, as do not wish to have their works inserted in this list, will please to mark on the corner of the book or packet, the word "*private*." The omission of this will be considered as permission for the insertion on the list.

Books received for Review since Dec. 1, 1820.

1. The Pharmacopœia of the Royal College of Physicians of London, 1809, literally translated, and the chymical decompositions annexed. By GEORGE FRED. COLLIER, Surgeon, Licentiate of Apothecaries' Hall, Private Lecturer on Chymistry, &c. One vol. 8vo. pp. 231. London, 1821.

☞ *The title-page sufficiently expresses the nature of this publication, which is designed for gentlemen preparatory to their passing at Apothecaries' Hall. The translation being literal, is a great advantage to them; and the chymical decompositions are asked at the Hall.*

2. A Statement of Facts, tending to establish an estimate of the true value and present state of Vaccination. By Sir GILBERT BLANE, Bart. &c. &c. from the tenth volume of the Medico-Chirurgical Transactions, with additions. London, pp. 18. Nov. 1820.

☞ *See page 718.*

3. A Dissertation on the Disorder of Death; or that state of the frame under the signs of death called Suspended Animation; to which remedies have been sometimes successfully applied, as in other disorders, &c. &c. &c. By the Reverend WALTER WHITER, Rector of Hardingham, Norfolk, and late Fellow of Clare Hall, Cambridge. One vol. 8vo. pp. 480. London, 1819.

☞ *See page 687.*

4. Medical, Geographical, and Agricultural Report of a Committee appointed by the Madras Government to inquire into the Causes of the Epidemic Fever which prevailed in the Provinces of Coimbatore, &c. &c. &c. By Drs. AINSLIE, SMITH, and CHRISTIE. One vol. 8vo. pp. 170, with a plate. London, 1816.

☞ *We beg to inform the publishers of this interesting work, who have forwarded us a copy, that in the monthly series of the Medico-Chirurgical Journal the work was amply reviewed and analyzed—consequently we cannot enter again on its consideration.*

5. Pharmacopœia Pauperum, quam in usum Noscomii Regalis Metropolitani ad Morbos Puerorum debellandos, sub auspiciis Regis Augusti Georgii IV. Anno salutis MDCCCXX. fundati, et perenni Memoræ Altissimæ Principissæ Walliarum Carolotta dicati, Medeci et Chirurgi Statuerunt Londini, 1820. Octavo, pp. 32. By Dr. GRANVILLE.

☞ *"The produce, says the Author, of the sale of the present Pharmacopœia, as well as of the Synopsis of the Diseases of Children, recently published by Dr. Granville, is intended for the benefit of the Infirmary."*

6. *Recherches Anatomico-Pathologiques sur l'Encephale et ses dependances.* Par F. LALLEMAND, Professeur de Clinique Chirurgicale a la Faculté de Medecine de Montpellier, &c. &c. One vol. 8vo. pp. 100. Paris, 1820. (*Lettre premiere.*)

7. Cases illustrative of the treatment of Obstructions in the Urethra, &c. by the new Instrument, THE DILATOR; with further directions to facilitate its general adoption. Also a case of extraction of stone from the male bladder, without cutting, by the Dilator; with an account of improvements of the method of dissolving stone by injection, and of the common operations of Lithotomy. By JAMES ARNOTT, Member of the Royal College of Surgeons, London. One vol. 8vo. pp. 119. London, 1821. *With a plate.*

☞ See page 743.

☞ *The following Italian Works have been transmitted to us for review by our friend and correspondent, Mr. Todd of Pisa, in Italy.*

8. *Della Nuova Dottrina Italiana.* Prolusione alle lezioni di Clinica Medica Nella P. Università di Bologna per l'anno Scolastico 1816-1817. Del Professore GIACOMO TOMMASINI. One vol. 8vo. pp. 98. Firenze, 1817.

9. *Prospetto de Resultamenti ottenuti Nella Clinica Medica.* Della Pontificia Università di Bologna nel corso di un triennio scolastico, 1819-1820. Del Professore GIACOMO TOMMASINI. Octavo, pp. 47. Pisa, 1820.

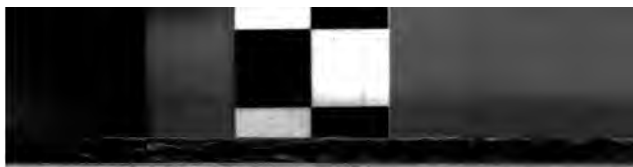
10. *Lettere del Cavalier Professore ANTONIO SCARPA, Al Cav. Professore A. Vacca Berlinghieri, sulla legatura della Grosse Arterie degli arti e riporta alle Medesime del Cav. Professore A. VACCA BERLINGHIERI.* Pisa, 1820.

11. *Memoria Sopra l'allacciatura dell' Arterie del Dottore ANDREA VACCA BERLINGHIERI.* Pisa, 1819.

12. *Della Esofagotomia e di un Nuovo Metodo di Eseguirla, Memoria di ANDREA VACCA BERLINGHIERI.* Pisa, 1820.

13. (*From the Author.*) *Recherces et Observations Physiologiques et Chirurgicales sur les anus contre Nature. 2d Partie.* Par GILBERT BRESCHET, Docteur en Medecine, Chef des Travaux Anatomiques, &c. &c. a Paris. 102 pages of MS. and five plates. Paris, 1821.

☞ *This very important manuscript we have transmitted to our respected cotemporary, "The Quarterly Journal of Foreign Medicine;" and when the whole is published, we shall present an analysis of the paper to our readers.*



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14. *Considerations Generales sur les Fistules et sur la formation d'un tissa accidentel dans leur trajet ; suivies d'observations recueilies à la clinique de M. le Professeur DUPUYTREN, sur different especes de Maladies de ce genre et leur mode particulier de traitement.* Par G. BRESCHET, &c. &c. &c. (*premier article*). pp. 16. 1821.

15. *Dell' Inflammazione, e della febre continua. Considerazioni Pathologico-Prattiche.* Di G. TOMMASINI, Professore di Clinica Medica Nella Università Di Bologna, &c. One vol. 8vo. pp. 272. Pisa, 1820.

☞ *We hope soon to give an account of this important Work.*

16. *Dicours prononcé par M. Le Professeur RICHERAND, Président de la Faculté de Medecine à Paris. Seance publique du 7 Nov. 1820.* Quarto, pp. 20.

☞ "*Desormais rendue à son unité primitive, la medecine en France, offre à peine de légères traces de ces divisions facheuses qui firent si long temps la joie de ses detracteurs, et mirent obstacle à ses progres.*" The professor deploras, however, the degraded state of the profession in his country, in consequence of the medical market being overstocked—partly arising from the gratuitous system of medical education. The rapid increase of population, he thinks, has driven a surplus of candidates into every liberal profession, but more particularly into the medical. "The hope of gaining a subsistence is the real cause, of the multitude des medecins et des abus qui naissent de cette facheuse multiplicité." From this dire necessity, says M. Richerand, of procuring something to eat (le besoin de diner tous les jours) has sprung the trade of editing medical journals, in which beardless boys endeavour to procure subscribers by abusing their masters." "*Cherchent à gagner quelques abonnés en injuriant leurs maitres.*" P. 11.

The Professor lashes "les transactions honteuses entre les medecins qui ordonnent et les pharmaciens qui preparent les medicamens," and the pretenders to secret remedies. But he laments to say that there are medical men who injure the profession, not from want, but from insatiable ambition. "It becomes," says he, "more and more difficult every day, to gain distinction in the first ranks of medicine, where a croud of able and learned men are thronging every avenue to the temples of Fame and Fortune. Art is therefore called in to the assistance of Talent and the most abominable machiavelian politics are made to violate all the laws of probity and honour, in subserviency to the thirst of fame, or the love of money." The Professor compares these desperate, and almost maniacal struggles for distinction, to the furious efforts of our unfortunate countrymen in the black hole of Calcutta, while trampling over the dead and dying to get to the only chink which admitted light and air:—"soulant aux pieds les cadavres de leur compagnons, s'efforçaient d'atteindre l'unique soupirail par lequel l'air et la lumiere pénétraient dans cet antre horrible!"

Such we hope is an exaggerated picture of the state to which the science of medicine has come on the Continent. For our own parts, we prefer those "divisions facheuses," which, in this country, has as yet secured some degree of respectability in our profession, to that

homogeneity, but deterioration of character, too evidently conspicuous in the present system of things elsewhere. It may be wise for us, however, to take a lesson from the state of professional affairs on the Continent, and prevent, if possible, a similar scene here.

17. A History of the Epidemic Fever which prevailed in Bridlington and the Neighbourhood, in the years 1818 and 1819. By HUMPHREY SANDWICH, Surgeon, Bridlington. Also, Observations in Medicine and Surgery, by THOMAS SANDWICH, Surgeon, Beverly. One vol. 8vo. pp. 320. London, 1821.

18. Recherches Anatomico-Physiologiques sur l'encephale et ses dependances. Par F. LALLEMAND, Professeur, &c. a Montpellier. *Seconde Lettre*, pages 222. Paris 1821. Transmitted by M. Breschet.

☞ Both Letters in our next.

19. Annals, historical and medical, during the first four years of the Universal Dispensary for Children, St. Andrew's Hill, Doctors' Commons, founded in 1816; for the sole purpose of affording prompt medical aid to the children of the necessitous poor, from the period of their birth to the age of twelve years, from all parts of the metropolis and its vicinity, &c. to which is added, a concise essay in elucidation of the rules and methods adopted at the Institution, on the bodily management of children, &c. &c. Edited by JOHN BUNNELL DAVIS, M. D. of the Royal College of Physicians of London—Senior Physician to the Universal Dispensary, &c. One vol. 8vo. pp. 648. 1821.

20. Practical Observations in Midwifery; with a Selection of Cases. Part I. By JOHN RAMSBOTHAM, M. D. Lecturer on Midwifery at the London Hospital, and one of the Physician Accoucheurs to the Lying-in Charity for delivering poor married women at their own habitations. One vol. 8vo. pp. 422, London, 1821.

21. Observations on the Climate of Penzance, and the District of the Land's End, in Cornwall; with an appendix, containing meteorological tables, &c. &c. By JOHN FORBES, M. D. Octavo, sewed, pages 64. London, 1821.

☞ See page 695.

22. History and method of cure of the various species of PALSY; being the first part of the second volume of a treatise on *Nervous Diseases*. By JOHN COOKE, M.D. F.A.S. Fellow of the Royal



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College of Physicians, and late Physician to the London Hospital. Octavo, pp. 215. London, 1821.

☞ See page 725.

23. *Practical Observations on Chronic Affections of the Digestive Organs, and on Bilious and Nervous Disorders*; being an attempt to combine with English practice some useful methods of cure employed on the Continent. Also, *Remarks on Warm Mineral Baths, Mineral Waters in general, and on the Use and Abuse of the Cheltenham Waters.* By JOHN THOMAS, M. D. many years resident physician at Toulouse, now practising physician at Cheltenham. Octavo, pp. 168. London, 1821.

24. *A Dictionary of Chymistry, on the basis of Mr. Nicholson's*; in which the principles of the science are investigated anew, and its applications to the Phenomena of Nature, Medicine, Mineralogy, Agriculture, and Manufactures, detailed. With an Introductory Dissertation containing instructions for converting the alphabetical arrangement into a systematic order of study. By ANDREW URE, M. D. Professor of the Andersonian Institution, Member of the Geological Society, &c. Royal Octavo, double columns, price one guinea.

☞ *This appears to us to be a very valuable work, of which we hope to be able to give some account in our next.*

25. *Opinion de M. Lefort, Medecin du Roi a la Martinique, sur la Non-contagion et Non-importation de la Fievre Jaune.* Publiée avec des notes, par. M. M. SEDILOT. Octavo, pp. 24.

☞ *It is hardly necessary to state that this opinion of M. Lefort has long been the conviction of the greater number of experienced observers in this country.*

26. *Engravings of diseased appearances, taken from drawings, with the symptoms, progress, and treatment of the cases.* By JOHN HARRISON, Member of the Royal College of Surgeons, and Assistant Surgeon, First, or Grenadier Regiment of Foot Guards. Royal quarto, three coloured plates, with letter-press description. London, 1821.

☞ *This is the first fasciculus of a series of delineations of those diseases usually called venereal. The plates are very well executed, and the attempt appears highly deserving of public encouragement. In our next we shall give a more particular account of the present fasciculus.*

27. *Revue Medicale No. VI. for January, 1820*; containing, among other varieties, an extensive review of Dr. Clark's *Medical Notes on Climate*; Dr. Bateman on *Diseases of the Skin*; the controversy between Dr. Philip and others, from this Journal, &c. &c. Vol. I, No. 4. M m m

28. *A Treatise on the Epidemic Cholera of India.* By JAMES BOYLE, Surgeon of H. M. S. Minden. Octavo, pp. 78. London, 1821.

29. *A Treatise on Gunshot Wounds, on Injuries of Nerves, and on Wounds of the Extremities, requiring the different Operations of Amputation; in which the various methods of performing these operations are shown, together with their after-treatment; and containing an account of the author's successful case of amputation at the hip-joint, &c. &c. with five explanatory plates.* Being a record of the opinions and practice of the surgical department of the British Army, at the termination of the war in Spain, Portugal, and France, in 1814. *Second edition, considerably enlarged.* By G. J. GUTHRIE, Deputy Inspector of Hospitals during the Peninsular War; Surgeon to the Royal Westminster Dispensary for Diseases of the Eye; Consulting Surgeon to the Western Dispensary for Diseases of Women and Children, Lecturer on Surgery, &c. &c. &c. One closely printed volume, 8vo. pp. 540, five plates. London, 1821.

☞ *Of this highly valuable volume we hope to present a comprehensive account in our next number.*

30. *Aperçu Philosophique sur la possibilité de Perfectionner l'Homme par les Modifications de son Organization.* Par M. A. DESMOULINS, Docteur en Médecine, &c. Bruxelles, 8vo. sewed, pp. 28. (*From M. Breschet.*)

31. *Notice sur l'Inflammation Aigue de la Substance Médullaire du Rachis.* Par PINEL, Fils, D. M. P. Octavo, pp. 16. Paris, 1821. (*From M. Breschet.*)

32. *Journal de Physiologie Experimentale.* Par F. MAGENDIE, D. M. &c. &c. No. 1, Janvier, 1821. Octavo, pp. 96, with a plate.

☞ *This first No. of a Journal dedicated to a most interesting department of Medical Science, reached us too late for analytical notice this quarter. It contains, among other important articles, two memoirs on absorption by Magendie—one on the introduction of viscid liquids into the blood—experiments on hydrophobia by the same—on inflammation of the spinal marrow—experiments on veratrine—memoir on the structure of the lungs in man; on the varieties of this structure at different epochs; and on the origin of phthisis pulmonalis. By F. Magendie—Recherches Anatomiques et Chimiques sur un Hydrocephale Chronique, par M. Breschet, &c. &c. &c. We shall give a further account of this interesting stranger in our next number. In the mean time we are much mistaken, if it will not be found one of the most important professional works which the periodical press of Paris pours forth with such profusion.*

In the Press, and speedily will be published in octavo, volume the first of the *Principles of Medicine*, written entirely on the plan of the Baconian Philosophy, to prove, that the only rational method of curing Disease, is to induce, by Medicine, an opposite or counteracting action, sufficiently powerful to expel the Disorder. By R. D. Hamilton, Medical Practitioner.

In the Press, and will shortly be published. The Principles of Forensic Medicine, explained, illustrated, and applied to British Practice. By J. G. Smith, M. D.

To Parents and Guardians.

The Editor of this Journal is acquainted with a Medical Gentleman in London, of talents and respectability, Surgeon to a public Institution, and in extensive private practice, who will admit a youth as an articulated pupil or apprentice, who will have opportunities of prosecuting his studies with many and peculiar advantages, which can only be appreciated by medical men.

The Editor will give further information, and names of parties, if applied to.

Mr. HADEN, of Sloane-street, is about to publish a Monthly Journal of Medicine, addressed principally to unprofessional persons ;—not designed to teach the cure, but the causes and prevention of diseases.

L. TOWNE has in the Press, and speedily will be published, The Farmer and Grazier's Guide ; containing a collection of valuable Recipes, for the most common and fatal Disorders to which Horses, Horned Cattle, and Sheep, are subject ; both tried and approved of by many of the greatest farmers in the land.

EXTRA LIMITES.

(Continued from page 784.)

III.

Dr. Granville's Reply to a Review in the Journal of Science.

THE accompanying reply to an article contained in Mr. Brande's Journal for January, 1821, on the subject of my work on Prussic Acid, was sent to that gentleman, through the hands of a friend, for insertion in his next Number. The result of this application will be better understood by a perusal of the following laconic correspondence.

*Saville-row, Wednesday Evening,
7th of February,*

Dear Sir,

I send you a reply to the article contained in your last number, purporting to be a review of my work on the Prussic Acid. Dr. Hutchinson, a particular friend of mine, has been kind enough to undertake to deliver it into your own hands, to prevent mistakes; and he is instructed to request you will have the goodness to name an hour in the evening of to-morrow, when he may call for your decision, as to whether you will admit, or not, the said reply for insertion in your next number for April. In case of your declining to insert it—a circumstance which I am far from contemplating—I have requested my friend to bring back the manuscript, without any further comment.

I have the honour to be, your humble servant,

A. B. GRANVILLE.

W. T. Brande, Esq. F.R.S. &c. &c.

Two days afterward, Mr. Brande returned me the manuscript, with a short note, of which the following is the beginning.

Thursday (not delivered till Friday night.)

"My dear Sir,

"You must surely be quizzing me, to suppose that I should insert the enclosed, &c.

"I am always yours, faithfully,

W. T. BRANDE."

"Dr. Granville, Saville-row."

How far, by the refusal of an act of justice and impartiality demanded of him, and by the language in which that refusal is conveyed, Mr. Brande has or not identified himself with my reviewer—and thereby rendered himself obnoxious to all and each of the charges I have brought forward, and, I hope, proved against the latter, I leave the reader to decide. It is

enough for me to observe, that Mr. Brande's conduct, as the editor of the *Quarterly Journal*, in this affair, is to me a matter of great astonishment; and that, as a member of the Royal Institution, I shall take the earliest opportunity of protesting, either at a general meeting, or to the board of managers, against that Society's lending its name to a journal in which an attack, involving matters of personal consideration, is admitted, and the reply, showing the injustice and unfairness of that attack, rejected.

Under these circumstances I avail myself of the facility, which the *EXTRA LIMITES* department of the *Medico-Chirurgical Review* has liberally opened to all parties, of giving publicity to my reply to the review in question.

A. B. GRANVILLE.

SAVILLE-ROW,
Friday, 9th February, 1821.

A Reply to an Article inserted in the 20th Number of the Quarterly Journal of Science, edited at the Royal Institution—purporting to be a Review of Dr. Granville's Treatise on the internal Use of the Hydrocyanic Acid.

In a Letter to W. T. BRANDE, Esq. F.R.S.
The EDITOR.

DEAR SIR,

You will readily remember, that when you informed me of having received a "severe" critique on my work on Prussic Acid for insertion in your Journal, of which, however, you assured me that no use would be made, if I no longer entertained the opinion I expressed in that work respecting the acid prepared at Apothecaries' Hall—I instantly replied, that you were welcome to admit and insert the article in question, if you thought proper: for as my opinion of the acid prepared at the hall, at the specific period at which I was writing, had been formed upon such ocular and experimental demonstration as would have warranted even stronger expressions of disapprobation on my part—I could not tamely surrender my humble judgment to the terror of any review of my book, however severe. The only concession I claimed in return was, that any reply that I might think it necessary to write to the article you mentioned, should be equally honoured with insertion in your Journal—and to the justice of this claim you readily acceded.

In order to bring these circumstances more particularly to your memory, it will be well to mention that the conversation

above referred to took place on the evening of the 14th of December, 1820, at Somerset House, a short time before the meeting of the Royal Society; and that it was again repeated by you, in a more cursory, yet impressive, manner, immediately after the Society had adjourned, as we were both in the act of leaving the meeting-room.

Had the review been "severe," yet just, correct, and candid, I should have preserved a becoming silence, and endeavoured to profit by the admonitions bestowed on me, however harshly; but as it possesses none of the latter qualities, I can scarcely be expected to suffer it to pass unnoticed.

When I state that the review is the reverse of being just, correct, and candid, I am advancing what, I trust, I shall fully prove to yourself and the public; and this circumstance induces me to declare, *in limine*, that, although by designating that review as "severe," you implicitly acknowledged that you had read it; yet, from my acquaintance with your character and urbanity of manners, I am free to assume that you had not paid any very particular attention to the structure of that article, and the assertions it comprises; or it would never have appeared in your Journal, to which I am proud in having been one of the earliest, and certainly not the least zealous of its contributors.

My observations, therefore, can, in no way whatever, apply to you as the editor of that Journal, except where it is explicitly so stated; but are directed to the writer, of whom the letter O stands as the representative.

To render my reply as perspicuous and as concise as the nature of the subject will admit, I shall, whenever I have an opportunity, adopt the form of *positive answer* to the assertions of the reviewer—rather than argumentative discussion, for which I have neither the necessary talent, nor any very particular inclination. No answer or reply will be given, to which I am not prepared to append a proof in support of its meaning—this being, in my opinion, the surest mode of conducting a defence.

The circumstances which induced the reviewer to notice my work are stated by him to be these:—

1. "The first part of it (the work) affects scientific arrangement; and the subject of which it treats, was first brought before the British public in this Journal."

2. "We wish to point out an error or two into which the Doctor has fallen."

3. "And to advertise him of two or three samples of bad taste which have probably escaped his notice."

To which I then reply, *seriatim*.



Reply 1. The purely scientific part of the subject of Hydrocyanic Acid was not first brought before the British public in the Quarterly Journal of Science; neither was its application to the purposes of medicine first adverted to in that Journal.

PROOFS. A masterly account of the discoveries and investigations of Gay Lussac on that subject was given in the Annals of Philosophy for December, 1815, at which epoch the Quarterly Journal was not in existence! And a paper *specifically written for the British Public*, respecting the use of Prussic Acid as a medicine, was inserted in the Medical Repository, two years and a half before the subject was noticed in the Quarterly Journal.

COROLLARY. O's first asseveration, therefore, is "incorrect."

Reply 2. Of the one or two errors into which I am said to have fallen by the reviewer, *one only* is mentioned, after all, by him in the course of his critique at page 402, respecting the specific gravity of prussic acid; and that is not an error of the author, but a typographical fault.

PROOF. See the *errata corrige* prefixed to my work, in which that fault is actually rectified.

COROLLARY. O's first accusation against me, therefore, is "unjust."

Reply 3. Of the two or three samples of bad taste of which O was anxious to "advertise me," only one is brought forward by him in his review—and that one sample of bad taste is only made to appear as such by artfully coupling together two short garbled quotations from my book.

PROOF. The anecdote related in my book, from which the quotations of the reviewer are taken, relates to a matter of fact, which he has not dared to repeat; or what he has called "bad taste," would have appeared to be "plain truth."

COROLLARY. O's conduct, therefore, is "wanting in candour."

After sketching a short and rapid account of the history of prussic acid, taken in some instances, *verbatim*, though without acknowledging it, from my work, the reviewer proceeds to assert, page 401, that:—

1. I have adverted to the history of that substance *superficially*.

2. That I have given the different processes for preparing the acid, *without sufficient remarks upon their principles*.

3. That I have passed judgment upon the merits of those processes, *not always tempered with mercy*.

To which assertions I beg to apply the following answers:—

Answer 1. The chymical history of Prussic Acid is *not* adverted to superficially in my treatise. It is more fully given than in many recent works on chymistry. It is a hundred times more extended than that substituted by the reviewer for the edification of his readers.

PROOFS. My Chymical history of Prussic Acid begins from the discovery of Prussian blue, and terminates with the latest researches respecting the component parts and real nature of the acid itself, by Gay Lussac; whose notions and atomic theories are fully given; while the intermediate epochs of this interesting history are duly noticed, the labours of several eminent chymists, particularly those of Morveau, Scheele, Berthollet, &c. as well as those of M. Porrett, in this country, are mentioned; and continued reference made throughout the section, as well as at the conclusion of it, to various works in which the subject has been treated in the most satisfactory manner. The historical account above alluded to occupies *twenty-four* printed pages of my work; while not one-third of that space, in the most approved modern works on chymistry, has been dedicated to that subject, excepting in the laborious and classical system of chymistry by Dr. Thomson. The chymical history of the same substance, substituted by the reviewer himself, occupies just *twenty-nine lines*.

COROLLARY. O's assertion, therefore, respecting my "superficiality," is incorrect.

Answer 2. It is *not* true, that I have given the different processes for preparing the acid "without any sufficient remarks upon their principles."

PROOFS. My description of Scheele's process, written with what perspicuity I could master, is followed up by a complete *rationale* of the various steps of that process, which had been ambiguously interpreted by others! Of Vauquelin's process I observed that its simplicity would render any remark of mine upon it an act of supererogation—and on the third, or Magendie's process, consisting in the mere dilution of the concentrated acid with water, I made enough remarks to attract the notice of the reviewer, who has grounded upon them a whole and long paragraph concerning their pretended incorrectness!

COROLLARY. O's assertion, therefore, is again, in this instance, "unjust."

Answer 3. The judgment I passed on the different processes, is so far from "being not tempered with mercy," that in two cases it is given in a strain of eulogium—and in the third no judgment is given at all!

PROOFS. Speaking of that of Scheele, I state, "By this method the acid is obtained at an uniform degree of concentration;" and again, "this acid is perfectly good for the purpose of practice;" while, on the subject of that of Vauquelin, I affirm, "that the acid prepared according to his method is of a proper strength for medicinal purposes."

COROLLARY. O's assertion, therefore, in this case, is again "wanting in candour."

And here I cannot help observing to you, my dear Sir, that this advocate for mercy so far forgets his own precepts, that throughout the review of my work sentiments are uttered and expressions used that are very distantly allied, indeed, to that heaven-born virtue. As a proof of this assertion, I need only mention that the very processes of two such eminent chymists as Scheele and Vauquelin, which he affects to defend from my unmerciful judgment, are, by him, dismissed in the most peremptory language of condemnation—the one as furnishing an acid of "variable composition," the other for being "extremely objectionable."

Speaking of the very curious but difficult branch of chymical inquiry, respecting the formation of Prussic Acid by the
Vol. I. No. 4. N n n

combination of animal matter, contained in the third section of my book, the reviewer says, that "I should either not have meddled with it, or given a clear epitome of what is known upon the subject." In answer to which I have to observe,

1st. That I have not meddled with the subject, which is still involved in absolute obscurity, any further than by repeating an uncontroverted fact, which, instead of being quoted in a garbled manner, should have been fairly transcribed by the reviewer; and, 2dly, That the whole of what is known on the subject of the formation of Prussic Acid by the combination of animal matter, is detailed in the said section, although that *all* be but little, and betray "a poverty in the land," as the reviewer poetically expresses it. And I challenge him to point out any book on chymistry in which more, or even as much, is to be found on that subject, that is not conjectural.

PROOFS. The very paragraph with which the section in question of my work begins, and which the reviewer imperfectly quotes, as unintelligible, is given in the identical language of Berthollet, from whose *Essai de Statique Chimique* it was collected—neither Thomson, nor Murray, nor Henry, nor Klaproth, nor Orfila, nor Lagrange, no—not even yourself, in your manual, have alluded to the inquiry in question in the slightest degree: so that the "epitome of what is known," may be well comprehended in the two pages that I have dedicated to that subject.

COROLLARY. The reviewer, therefore, is on the present occasion, as on all the preceding ones, wanting in "justice" as well as "candour."

But I have done more:—I have given an extract from my notes taken while attending a course of lectures on animal chymistry, delivered by Vauquelin, in which an endeavour is made to place the above subject in a somewhat clearer light. Yet what is the conduct of O on this occasion? With the same *nonchalance* with which he had, just before, talked of the *unintelligibility* of two paragraphs borrowed from Berthollet and Thenard, he assures his readers, that the extract from Vauquelin's lectures is not a tittle more intelligible; and dismisses it without any quotation in support of his affirmation. Now, as I mean throughout this letter to substantiate by PROOFS what I advance on the score of O's candour and justice; and as I hesitate not to assert, that the charge of unintelligibility against Vauquelin is as gross a defection from truth, as that which characterizes the charge brought against his process for preparing the hydrocyanic

acid, I shall beg leave to quote, once more, the passage in question, in order that the reader may judge whether or not it be *unintelligible*. "When animal substances are exposed to heat with a mixture of alkalies—hydrogene, carburetted, and carbonic gas are obtained, besides a *residuum*, which, if washed in water, will be found to contain prussic acid. The alkali, therefore, seems necessary to form the prussic acid, by attracting together the principles of which it is constituted," &c.* If this be unintelligible, then plain language is not capable of expressing common ideas; but if, on the contrary, the passage be found perfectly comprehensible, and such, indeed, as will be met in substance, in the works of most men of eminence who have written on the same subject, then the conclusion regarding the reviewer's candour is unavoidable.

The reviewer's charge, at page 406, of my having unnecessarily separated the account of the physical properties of the prussic acid, from its chymical history and preparation, is of too trivial a nature, and absurd, to need refutation. Every book on chymistry is full of examples of such practice; and Gay Lussac himself has followed no other method in his admirable essay on hydrocyanic acid.

In the succeeding paragraph of his critique, relating to the physiological experiments made with the *pure hydrocyanic acid* by several authors and myself, the reviewer remarks, that "as Mr. Brodie's investigations, upon this subject, are the most satisfactory that have hitherto been made; and, as they are not even alluded to by me, he shall decline troubling his readers with those I have detailed." To which, this is my reply:

1. Mr. Brodie NEVER made any experiment with the *pure hydrocyanic acid*.
2. Previous and subsequently to Mr. Brodie's investigation respecting the action of various poisons on animals, Coullon, Emmert, Magendie, and others had and have instituted experiments with the pure hydrocyanic acid, or with substances containing it, not

* It is not a little curious that one of the most important works on Chymical Science, written in the English language, should contain a passage nearly similar in import to the above, on the subject of Prussic Acid. Having described the process of heating blood and alkalies, to procure the acid—the author proceeds to give the following explanation of that process. "This process consists essentially of two operations, one the impregnation of the alkali with that peculiar principle contained in the blood, which gives the power of striking a blue colour with iron, and is called the Prussic Acid," &c. *Vide Aikin's Dictionary of Chymistry, Art. Prussian Blue.*

only upon animals, but upon the human system, which, in a work of practical utility, and not simply of philosophical speculation, could not but be preferred to every other experiment.

Either, therefore, O knew all this; and in such a case, where is candour and truth in concealing it?—or he knew it not; and in that case, it was his duty, ere he undertook to criticise the book, to have made himself master of its subject.

The eighth section of the work relates to the means of detecting prussic acid, and preventing its poisonous effects: “in neither of which, says the candid and just reviewer, do we remark any thing either very new or very important;” but respecting which I must beg leave to ask him two questions.

1. Is it not *very important* to determine the symptoms of poisoning by this acid, and to ascertain the best means for counteracting its deleterious effects? These objects have been accomplished, as far as they could be, in the said eighth section.

2. Is it not *very important* to be acquainted with the means of detecting the presence of prussic acid, particularly in cases of death from that substance? And have these means, or the mode of conducting the investigation, been pointed out to the public before the appearance of my work, by any chymist, English or foreign? Is not that new, which is not to be found elsewhere? Is any thing of the kind contained in the works of Fourcroy, Chaptal, Thenard, Thomson, Murray, Orfila, Henry, Children, or even in your own manual of chymistry? No.

Then what becomes of the justice, correctness, candour, and I may now add, the knowledge, in these matters, of the reviewer? Perhaps some evidence of all these qualities is to be found in the remaining part of the Review, relating to the most important as well as to the largest portion of my work, which is dismissed in ten lines and a half!

I am now arrived at that part of my reply, upon which I enter with feelings of great reluctance; because it alike involves charges of a heavy nature against the reviewer; and obliges me, from a sense of what is due to truth, publicly to deny the correctness of opinions said to be your own.

My charges against the reviewer are, 1. Misrepresentation, or concealment of facts. 2. Ignorance of the subject on which he has undertaken to pronounce. 3. Unworthy insinuations against the author whose book he reviews. Each and all of which charges, in pursuance of the plan I have followed throughout this reply, I shall proceed to substantiate by positive proofs; leaving, however, to the public, the task of drawing, in this instance, the corollaries that must necessarily follow.

The first charge, or that of misrepresentation or concealment of facts, is supported by the following evidence:—1. The reviewer tells his readers that the formula of Dr. Magendie for diluting Gay Lussac's acid is not given in my book (p. 402;) whereas the *fact* is, that at page 20 of my Treatise I have inserted that formula thus: "Dr. Magendie dilutes the concentrated acid of Guy Lussac with six times its volume, or eight times and a half its weight of distilled water."—2. The reviewer, in the same paragraph, informs his readers that the number 9.20583 is quoted by me as the "medium density" of Magendie's diluted acid; whereas the truth is, that I distinctly used the word *weight*, meaning the absolute weight, and not the "*medium density*" of a mixture of 8.5 of water and 0.70583 of concentrated acid.—3. The reviewer says, I have "fallen into some sad errors respecting the specific gravity of the pure acid," and merrily and triumphantly quotes a typographical fault by which I am made absurdly to state the specific gravity of the acid to be 70.583; whereas in the *errata*, which every candid reviewer would have turned to on seeing such an absurd mistake, the printer's error is actually rectified, and the specific gravity correctly given thus, .70583.—4. The reviewer states, "that the doctor insinuates, though he must know better, that the acid sold at Apothecaries' Hall is *always* turbid, yellowish, and *impure*." This is not true. The *Doctor* never expressed such an insinuation; nor did he use the two words, "*always*" and "*impure*," which the reviewer, with utter disregard to propriety, has attributed to him, and has even marked in italics. The following is the only passage in which I passed any degree of condemnation on the acid prepared at Apothecaries' Hall; "I know, besides, that the acid thus prepared is of a turbid yellowish colour, instead of being colourless and transparent, and that it deposits a considerable sediment; both which circumstances *seem* greatly to militate against its *purity*."

The second charge against the reviewer, or that of ignorance of the subject on which he has undertaken to pronounce, is thus substantiated. 1. The reviewer states at page 400, that he is "not quite clear" whether Gay Lussac gave the name of *cyanogene* to the base of hydrocyanic acid "because it burns with a bluish purple flame, or because it is essential to the production of Prussian Blue;" whereas, Gay Lussac is positive as to the latter reason; and every chymist acquainted with the subject knows it to be so.—2. The reviewer asserts, that the acid obtained by Scheele's method, "is of variable composition, because Prussian blue is not always of equable purity;" but this is not true in practice. Mr. Garden has

prepared prussic acid according to this method for the last three years and a half, with an invariable precision of result and equality of strength, which, to judge of its constant specific gravity, is stronger than that prepared at Apothecaries' Hall.—3. The reviewer has acknowledged his inability of obtaining pure prussic acid by Vauquelin's method, which he asserts to have tried frequently. But the want of success in his case must be ascribed to his ignorance in chymical manipulations, *as you well know*; for you have seen pure prussic acid prepared according to that method.—4. The reviewer says he cannot understand the following passage of my work, containing the well-known hydrodynamic axiom, that "the weight of fluids is equal to their volumes multiplied by their densities." I can only observe, in reply, that if he is a stranger to mathematical language he has only to refer to Dr. Young's lectures on Natural Philosophy, or Briot's, or Brisson's, or any other author's work on the same subject, in all of which that very axiom is mentioned and explained. In the instance above alluded to, the passage was translated *verbatim* from a note in Dr. Magendie's pamphlet on the subject of which I was commenting.—5. The reviewer, making himself quite merry, and rioting in the pleasures of the discovery of the "Doctor's sad errors," asserts that the specific gravity of a mixture of six volumes of water at 1. and one volume of acid at 0.70583, such as Magendie employs, must be 0.9900: whereas, any person acquainted with the common rules of alligation, would know that $\frac{6 \times 1 + 0.7853}{7} = 0.9579$. To which I add that such

is nearly the actual specific gravity of the mixture in question, ascertained by repeated experiments—the "increase of density resulting from the mixture of the pure acid with water" not being so "great" as the reviewer boldly asserts.

The third charge against O, namely, that of throwing out unworthy and unwarrantable insinuations against me, will be best substantiated by a quotation of his own expressions. "We should have conceived it more decorous on the part of Dr. Granville, finding the above preparation objectionable, as he has asserted it to be, to have stated the objections to the Apothecaries' Company, *instead of publishing their process with a view to depreciate it, and to employ it as a vehicle of a puff-oblique in favour of the Doctor's chymist, Mr. Garden.*" I despise too much the individual, who, without the slightest degree of evidence in support of them, can assume and publish two such inferences, and direct them against the moral rectitude of an author—to be disposed to take any other notice of the above disgraceful insinuations against my character, than to express my utter astonishment, that you should have suf-

ferred it to appear in your Journal! Did you know of any thing in my conduct during the six or eight years of our acquaintance; or any passage in my work which could have led you to admit, for one instant, the propriety of the aspersions of my reviewer? The only passage that relates to Mr. Garden the chymist, and which is contained in the same paragraph of my work, which seems to have given such mortal offence to O, is this: "I have not had an opportunity of trying this acid (the apothecaries') as I am satisfied with that which Mr. Garden prepares for my patients." Is *truth*, then, synonymous with *puff-oblique* in the moral lexicon of my reviewer?—As to its being or not "*more decorous*" for me to have stated the objections I entertained against their acid, to the Apothecaries' Company themselves, instead of publishing those objections; I have yet to learn that that worshipful body have any claim to the services of any physician. Let them look to their own business; and see that their own officers do their duty. O gives a sort of manifesto in his review, from the Apothecaries' Company, in which they declare, that they "*have no secrets*;" if so, why should he feel sore at my having published their process of preparing the hydrocyanic acid? and how, I would furthermore ask him, can the publication of such a process, "*depreciate it*," as he rather awkwardly states, if the process be inherently perfect?

A few more words on the subject of certain opinions ascribed by the reviewer to yourself; and on the defence set up by that gentleman in favour of the Apothecaries' acid of 1819 and 1820, and I conclude.

You are said, in the Review, to have reported to the Laboratory Committee of the Apothecaries' Society that, "having tried the methods of Scheele and Vauquelin, you found them uncertain in their products, and more especially in the latter case, the specific gravity of Vauquelin's acid *always exceeding* that of distilled water." In opposition to which opinions, I assert, 1. That Scheele's method, with common precaution, yields, by far, the most equable and the purest acid for medicinal purposes, of a specific gravity inferior to that quoted by you as the density of the acid prepared according to your own formula, and which is stated to be 0.995, although I have found it to be as high as 0.998 in two specimens procured at the Hall a few weeks back—whereas, 0.993 is the invariable density of Scheele's acid at an uniform temperature. 2. That by Vauquelin's method, prussic acid, possessing all the requisite physical and medicinal properties, colourless, transparent, and of the specific gravity of 0.993, and, consequently, *under the standard density* of distilled water, can be procured—is annually procured to a large amount by the French chymists, who sell no other—and has

been procured by me at two different times, since your assertion to the contrary has been published by the reviewer. You have not, I suppose, forgot, that, on the evening of the 18th ultimo, I showed you at the table of the Royal Society, a specimen of the acid so prepared by me, as well as another, prepared, according to Scheele's process, by Mr. Gardes, which you admitted to be "as good specimens as could be desired, and the purity of which, to judge of their specific gravity marked on the phials containing them, seemed to be quite unobjectionable." It was on that same occasion that I remarked to you, that the accuracy of Vauquelin was too well established, to allow us for a moment to suppose, that he would have recommended a process which, according to your expressed opinion, "is uncertain in its products," and the specific gravity of which "is *always* greater than that of distilled water." To the justice of this remark you then assented. The specimens alluded to were shown that same evening, and in the same place, to Dr. Holland and Messrs. Philips and Faraday, to whom, as well as to you, I exhibited two other specimens of the acid, procured at Apothecaries' Hall in 1819 and 1820. One of these, presented a fluid of a dark-brown colour—turbid, when shaken—but transparent when suffered to rest so as to give time for a copious blackish sediment to subside: the other offered a fluid of a muddy colour and appearance, though by no means so striking as in the former case. From these two specimens, obtained at two different periods from the Hall, I then declared to you, and to the other gentlemen above mentioned, what I again repeat on the present occasion, that the description of the Apothecaries' acid, contained in the second edition of my work, was taken; and I may, I think, call upon you to say, whether under such circumstances, I should not have been justified in passing a *severer* judgment upon the merits of that acid, than that which my reviewer has qualified by the expression, "not tempered with mercy;" and to which I omitted to advert in another part of this reply, because I considered the present as a fitter opportunity for so doing.

The fact is, that both you and the reviewer—the one verbally, in conversation with me—the other in writing, at page 404 of his Review, have admitted the justice of my remark as to the appearances of the acid prepared at Apothecaries' Hall; and it remains only for me to say, in conclusion, that if my reviewer can assert, as he has done at page 404, that "the occasional yellowness and turbid appearance of that acid is *rather an indication of its purity than otherwise*," his logic will certainly fail to convince his readers, as it failed to convince myself. If, however, by the admission that the



acid is occasionally yellow and turbid, and presents, moreover, a sediment, its decomposition is also admitted (which the reviewer has virtually done ;) then a preparation liable to such fatal objections, ought not to have been defended as a "very uniform and very pure product;" nor sold as *purè prussic acid* by the Apothecaries' Company, to supply "the occasional demand" for that article, as they have unquestionably done in the case of the two specimens in my possession, which were nearly as objectionable in their appearance when first procured, as they are now, when "age" and "purity," says the reviewer, are to be considered as the two causes of those objectionable appearances. For the information and caution of every medical practitioner, I publicly exhibited, last night, at a meeting of the Medico-Chirurgical Society, the two latter specimens, as well as those alluded to in the course of this letter; which have been prepared agreeably to Scheele's and Vauquelin's methods—and will show them to any other member of the profession, who may be desirous of inspecting them.*

As to the tone and style, generally, in which O.'s review is written, I can only assent to the judgment passed upon them, in a scientific circle, by one of the first philosophers in the country;† to whose opinion both you and I must readily bow—which judgment, given in the presence of two or three other gentlemen, but addressed to me in particular, went to condemn both as equally derogatory from the dignity of a reviewer, and injurious to the journal in which such a Review has been admitted.

I have the honour to be your humble servant,

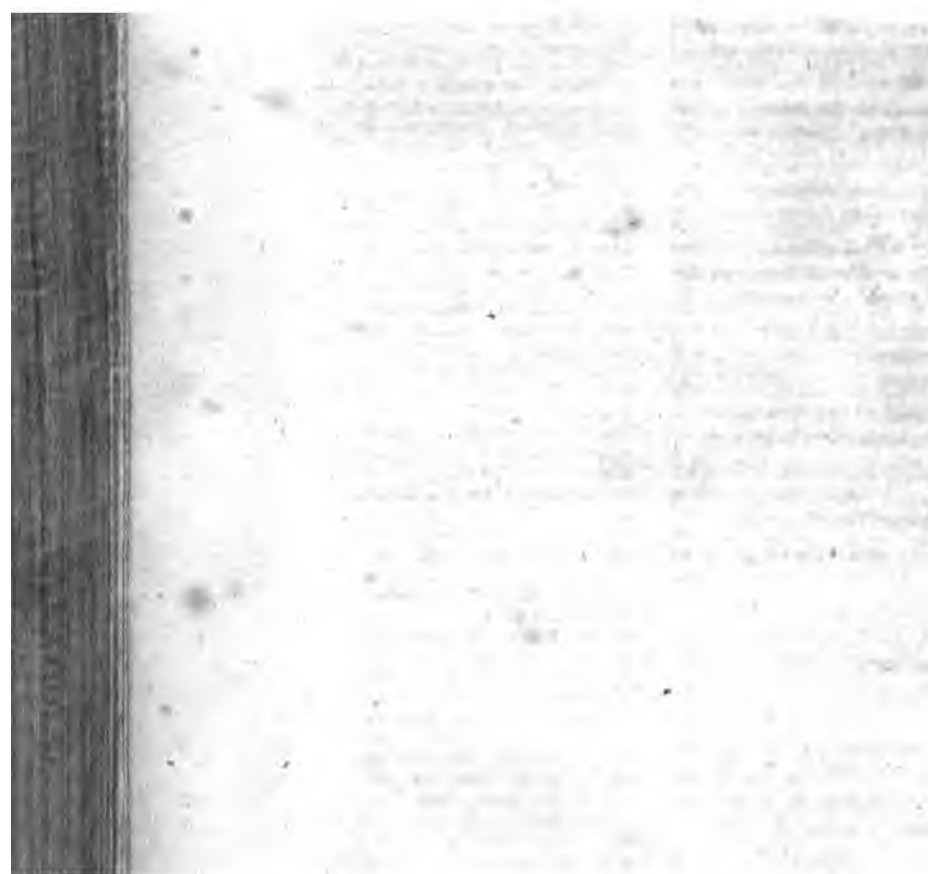
A. B. GRANVILLE.

Saville-row,

Wednesday, 7th Feb. 1821.

* The relative value of the acid prepared by Mr. Garden, and at the Hall, according to Mr. Brande's formula, will be further illustrated by the following facts. A pupil of St. Bartholomew's assured me the other day, that the Apothecaries' acid had been administered to patients in that hospital, in doses of *twenty-four* drops at a time, without the slightest obvious effect. Mr. Travers mentioned to the Medico-Chirurgical Society, a few nights since, that one of the servants of St. Thomas's Hospital, having inadvertently swallowed a mixture containing about eighteen drops of prussic acid, prepared by Mr. Garden, which he mistook for an aperient draught, fell down on the floor as if shot by a cannon-ball! and continued ill for some days.

† This last paragraph has undergone a trifling verbal alteration, since the manuscript was submitted to Mr. Brande, and rejected—in consequence of that gentleman having erroneously interpreted its original meaning, in his note to me, and also with a view to avoid any such misinterpretation.



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✂ We are requested by Sir James M'Grigor to say, that the venerable and able Dr. JACKSON, after a tour of the Ionian Isles, Constantinople, Gibraltar, Cadiz, &c. for the purpose of investigating the subjects of Plague and Fevers of those places, has returned, and is putting to press the result of his investigations. We can have no doubt that our brethren will show their respect for this worthy member of the profession, by their patronage of the work, viz. before the 10th *May*, 10th *August*, 10th *November*, and 10th *February*.

Directions to the Binder.

The Tables of Contents are to be taken from the four Numbers published, and to be bound up with the Volume after the Title Page. They are paged for that purpose. The Plate in No. 1, is to face page 68—that in No. 3, to face page 456—and that in No. 4, to face page 756.



1. The first part of the document is a list of names and dates, arranged in a table-like format. The names are written in a cursive script, and the dates are in a standard font. The list is organized into two columns, with names on the left and dates on the right. The names are: John Smith, James Brown, William Jones, Thomas White, and Robert Green. The dates are: 1789, 1790, 1791, 1792, and 1793. The list is followed by a paragraph of text.

2. The second part of the document is a paragraph of text, written in a cursive script. It begins with "I have the honor to acknowledge the receipt of your letter of the 10th inst." and continues with "and in reply to inform you that the same has been forwarded to the proper authorities for their consideration." The paragraph ends with "Yours very respectfully, J. B. Smith".

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